

FACOR / Bhadrak / Legal / 194 /2022

Dtd.30.11.2022

To

Deputy Director General of Forests (C),
Ministry of Env., Forest and Climate Change,
Integrated Regional Office,
A/3, Chandrasekharapur, Bhubaneswar – 751023
Email: roez.bsr-mef@nic.in

Ref : 1. **Environment Clearance letter No. :** F.No.J-11011/594/2008-IA II (I), dtd. 04.05.2009.
2. **Name of the Project:** Expansion of Ferro Alloys Plant (High Carbon Ferro Chrome, 65,000 TPA to 1,30,000 TPA) at Randia, District Bhadrak, Orissa by M/s. Ferro Alloys Corporation Ltd.

Sub : **Submission of Six Monthly Compliances Report against Environment Clearance letter No. :** F.No. J- 11011/594/2008-IA II (I), dtd. 04.05.2009 issued to M/s. Ferro Alloys Corporation Ltd. for the period from April 2022 to September 2022.

Dear Sir,

In compliance to General Condition No. ix of the Environment Clearance letter No. : F.No.J-11011/594/2008-IA II (I), dtd. 04.05.2009, issued by your good office. we are submitting herewith Six-Monthly Compliance Report with respect to Charge Chrome Plant of M/s. Ferro Alloys Corporation Limited, situated at -D. P Nagar, Po-Randia, District – Bhadrak for the period from April 2022 to September 2022.

The Monthly Environmental Monitoring data and other required information with respect to compliance of the said Environment Clearance for the period from April 2022 to September 2022 are also enclosed herewith as Annexure for your kind perusal and records.

Further, we would like to inform that recently we have received Environment Clearance vide EC Identification No. EC22A008OR193113 for the expansion project of our Charge Chrome Plant of M/s Ferro Alloys Corporation Ltd. As such the six-month compliance report of this new EC will be submitted in due time.

Received of the same may kindly be acknowledged herewith.

Thanking you
Yours faithfully

For Ferro Alloys Corporation Ltd.


Factory Manager
Charge Chrome Plant

Enclosed: As above.

Copy to: Director I.A. Division, Ministry of Environment and Forest, Paryavaran Bhawan, New Delhi.

**Six Monthly Environmental Compliance Report
For the period from April 2022 to September 2022**

S.No	Conditions	Compliance of Conditions
	A. Specific Conditions	
1	i Continuous monitoring facilities for all the stacks and sufficient air pollution control equipment's viz. fume extraction system, cyclones and bag filters to the gas cleaning plant (GCP), ID fan and stack of adequate height to submerged arc furnace shall be provided to control particulate matter emissions below 100 mg/Nm ³ . Bag filters shall be provided to control the dust generated from the briquetting plant. The Orissa Pollution Control Board may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location. At no time, the emission level shall go beyond the prescribed standards. Interlocking facilities shall be provided so that process can be automatically stopped in case emission level exceeds the limit.	Complied. The exhaust gas from the semi opened Smelting Arc Furnace generated at a temperature of over 350°C containing dust Particulates, Sulphur Dioxide; Oxides of Nitrogen, Carbon Monoxide is cleaned by Dry Gas Cleaning Plant. GCP consists of Ducts, Equalizer, Trombone Cooler, ID Fan, Bag Filters for separation of dust from the flue gas. Regular preventive maintenance of pollution control equipment's is carried out. AAQMS and Stack monitoring is done by authorized 3rd Party on monthly basis. Report enclosed herewith as Annexure -A. The emission level is within prescribed standard.
2	ii At least four ambient air quality monitoring stations shall be established in the downward direction as well as where maximum ground level concentration of SPM, SO ₂ and NOx are anticipated in consultation with the OPCB. Data on ambient air quality and stack emissions should be regularly submitted to this Ministry including its Regional Office at Bhubaneswar, OPCB and CPCB once in six months.	Complied. The ambient air quality monitoring is done in four different location of the plant - Auto garage, MRP Plant, MRSS and R&C Lab. Stack monitoring of GCP and Dryer stack is done by authorized 3rd party Kalyani laboratories PVT. LTD. Data on ambient air quality and stack emission are being regularly submitted to OSPCB.
3	iii In-plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Dry fog dust suppression system will be provided at crushing (and screening section of metal recovery plant to control fugitive emissions generated during crushing, screening etc. Dust extraction system shall be provided to control the fugitive dust from raw material handling, screening and conveying section along with product handling section, transfer and feeding points to control fugitive dust emissions to meet the OPCB norms. Internal roads shall be made black topped and asphalted. Water spraying shall also be done to prevent the dust emanation due to vehicular movement.	Complied. In order to control the fugitive emission there are bag filters attached to dryer plant. Water sprinklers are provided at storage hopper and feeding points of raw material handling system. Plant roads & approach roads have already made concreted, with the help of one water tankers of 10KL capacity are being sprinkled over the roads throughout the working shift to prevent the dust emanation due to vehicular movement.
4	iv Data on ambient air quality, stack emissions and fugitive emissions shall be uploaded on the Company's website and also regularly submitted on-line to the Ministry's Regional Office at Bhubaneswar, Orissa Pollution Control Board (OPCB) and Central Pollution Control Board (CPCB) as well as hard copy once in six months. Data on SPM, SO ₂ and NOx shall also be displayed prominently outside the premises at the appropriate place for the information of general public.	Authorized 3rd party monitoring report of air quality and stack emission is been submitted in monthly for the concern Orissa Pollution Control Board (OPCB). Report enclosed herewith as Annexure -B. Data on ambient air quality, stack emission and fugitive emissions will be uploaded on company's website shortly after resumption of server error in the company portal. Data on SPM, SO ₂ and NOx are being displayed prominently outside the premises at the appropriate place for the information of general public.
5	v Secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed.	Complied. Secondary fugitive emissions are being controlled by bag houses at dryer & briquetting plant, water sprinklers and water tankers all other area of the plant.
6	vi Vehicular pollution due to transportation of raw material and finished product shall be controlled. Proper arrangements shall also be made to control dust emissions during loading and unloading of the raw material and finished product.	Complied. The water tanker of 10KLD capacity are being used as dust suppression on concrete roads through out working shift with proper housekeeping contract service to control dust emissions during loading and unloading of the raw material and finished product.
7	vii Total water requirement should not exceed 168 m ³ /day ground water as per the 'permission' accorded by the Central Ground Water Authority vide letter no. 21 4(74)/SER/CGWA/2008-1281 dated 24h October, 2008. Closed circuit cooling system shall be adopted to reduce water consumption. Effluent from Soft water plant shall be neutralized and collected in equalization-cum-settling pond and clear water recycled/reused for dust suppression, metal cooling, slag granulation, green belt development and other plant related activities within the plant premises. Cooling under blow down shall be treated and completely recycled. Wastewater from Jigging Plant shall be treated in a settling tank and reused in Jigging plant. No wastewater shall be discharged outside the factory premises and 'zero' discharge shall be adopted. Domestic wastewater shall be treated in septic tanks followed by soak pit system and used for green belt development.	Complied. We have obtained NOC from Central Ground water authority (CGWA) for use of ground water in our charge chorme plant and the total water are beign used within the prescribed limit of CGWA. Closed circuit cooling system are being adopted to reduce water consumption. No wastewater are being discharged outside the factory premises and 'zero' discharge are being adopted. Work in progress for installation of STP and the treated water to be used for green belt development.
8	viii Zero' effluent discharge shall be strictly followed and no wastewater shall be discharged outside the premises.	Complied. 'Zero' effluent discharge are being strictly followed and no wastewater are being discharged outside the premises.


Manoj Kumar Shaw
 Factory Manager
 Ferro Alloys Corporation Ltd.
 D.P. Nagar, Randia
 Bhadrak-756135



9	ix	Metal Recovery Plant shall be installed to recover metal in metal recovery plant (Jigging plant) through hydraulic juzzing process. Discharge from metal recovery plant shall be monitored for the Chromium content and maintained within the permissible limit before recycling-and-reuse. Slag-tailings shall be dumped-in-own-premises in secured-land fill as per CPCB guidelines after recovery of the metal. Used oils/lubricants shall be sold to authorized recyclers / reproprocessors.	Complied. Metal Recovery Plant has already been installed. Discharge from metal recovery plant are being monitored for the Chromium content and maintained within the permissible limit before recycling-and-reuse. Slag-tailings are being dumped-in-own-premises in secured-land fill as per CPCB guidelines after recovery of the metal. Used oil is being disposed within 90 days to authorized vendor according to hazardous authorization 2016.
10	x	Chromate slag shall be used for road making only after passing through Toxic Chemical Leachability Potential (TCLP) test. Otherwise, Ferro chrome shall be recovered from the slag and output waste shall be disposed in secured landfill as per CPCB guidelines. All the other solid waste shall be properly disposed off in environment-friendly manner. No hazardous materials shall be spilled out and good house keeping practices shall be adopted. Hazardous waste shall be handled as per the Hazardous Waste (Management & Handling) Rules, 1989 and subsequent amendments.	Complied. The slag is being reused as a filling in the low lying areas and for the road making purpose as per the approval of OSPCB. All the other solid waste are being properly disposed off in environment-friendly manner. No hazardous materials are being spilled out and good house keeping practices has already been adopted. Hazardous waste are being handled as per the Hazardous Waste (Management & Handling) Rules, 1989 and subsequent amendments.
11	xi	Product fines, flue dust should not be dumped anywhere but reused in the process. Flue dust and briquette plant dryer dust along with chrome ore fines shall be reused for making briquettes after ensuring non-hazardous in nature. Sewage sludge from Septic tank shall be used as manure.	Complied. The flue dust is reused by Collecting in Silo through chain conveyor and made into pellets, Pellets are charged into furnace on day-to-day basis. The work is under progress for use of sewage sludge from Septic tank as manure.
12	xii	Proper handling, storage, utilization and disposal of all the solid waste shall be ensured and regular report regarding toxic metal content in the waste material and its composition, end use of solid/hazardous waste shall be submitted to the Ministry's Regional Office at Bhubaneswar, OPCB and CPCB.	Complied. Solid and hazardous waste is being monitored and intimation to the concern authorities before and after the disposal of waste. FORM 4 annual report is submitted to OSPCB on yearly basis. Copy enclosed herewith as Annexure -C.
13	xiii	As proposed, green belt shall be developed in at least 84 acres (33 %) out of total 205.50 acres within and around the plant premises as per the CPCB guidelines in consultation with DFO.	We have developed greenbelt in & around the plant premises. However we are going to conduct green belt survey by engaging authorized third party to assess the actual percentage of coverage.
14	xiv	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Ferro chrome units shall be strictly implemented.	Complied. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Ferro chrome units are being implemented.
15	xv	All the issues raised during the Public Hearing / Public Consultation meeting and commitments made shall be satisfactorily implemented.	It has been clarified vide Para 4.0 of the Environment Clearance dated on 04.05.2009 that no public hearing is required as per section 7(ii) of EIA notification, 2006.

B		General Condition	
1	i	The project authorities must strictly adhere to the stipulations made by the Orissa Pollution Control Board (OPCB) and the State Government.	All the necessary measures have been taken to adhere to the stipulations made by Orissa Pollution Control (OPCB) and the State Government.
2	ii	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests.	Complied.
3	iii	Industrial wastewater shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended form time to time. The treated wastewater shall be utilized for plantation purpose.	The Industrial waste water are properly collected through garland drain and recycle to the process. The treated wastewater is being utilized for plantation purpose.
4	iv	The company shall develop rain water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table.	We have provided three nos rainwater harvesting pond in plant as well as colony area to conserve rain water and utilize in lean season.
5	v	The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (nighttime).	Noise level is being monitored internally in all major working location inside the plant premises and are within the standard.
6	vi	Occupational Health Surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Periodic Medical Examination is being conducted yearly for all employees and workmen on regular basis and records are also being maintained as per the Factories Act.
7	vii	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report. Further, the company must undertake socio-economic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc.	We are complying with all the environmental protection measures and safeguards recommended in the EIA/EMP report. Further, we have already engaged our CSR team for undertaking socio-economic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc.



Mandj Kumar Shaw
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Factory Manager
Ferro Alloys Corporation Ltd.
D.P. Nagar, Randia
Bhadrak-756135



8	viii	As proposed, Rs. 10.00 Crores and Rs. 4.00 Crores shall be earmarked towards capital cost and recurring cost/annum for the environment pollution control measures shall be judiciously utilized to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. The funds so provided shall not be diverted for any other purpose.	The company has been acquired by Vedanta Ltd. As per the order dated 30.01.2020 of National Company Law Tribunal Cuttack bench. A new board has also been constituted on dated 21.09.2020 pursuant to the order of NCLT and the provision of IBC - 2016. The new management has already proposed specific budget to be utilized for environment pollution control measures and to implement the conditions stipulated by MOEF as well as the state government.
9	ix	The Regional Office of this Ministry at Bhubaneswar / CPCB / OPCB shall monitor the stipulated conditions. A six monthly compliance report and the monitored data along with statistical interpretation shall be submitted to them regularly.	Monitoring data is being sent to OPCB on monthly basis. Six monthly compliance report submitted to MOEF herewith.
10	x	The Project Proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the OPCB and may also be seen at Website of the Ministry of Environment and Forests at http://envfor.nic.in . This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the Regional office at Bhubaneswar.	We have published and circulated the environment clearance of our plant on daily odia newspaper Samaj and Sambad dated 01.10.2009 for information of public. Enclosed as Annexure D.
11	xi	Project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	Complied.


Manoj Kumar Shaw
 Factory Manager
 Ferro Alloys Corporation Ltd.
 D.P. Nagar, Randia
 Bhadrak-756135



 KALYANI LABORATORIES PVT. LTD. PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA				
TEST REPORT				
NABL ULR NO	: TC704322000012346P			
Test Report No	: 1314 KLPL/4/22/ENVN/01651		Issue Date	: 04-May-2022
Amendment No	: -		Amendment Date	: -
Reference	: W.NO-MAT/80/36/1920 DATED 05.06.2019			
Customer Name	: FERRO ALLOYS CORPORATION LTD.			
Address	: CHARGE CHROME PLANT ,D.P. NAGAR, RANDIA-756135,BHADRAK,ODISHA.			
Date of receipt	: 30-Apr-2022	Commenced On	: 30-Apr-2022	Completion On : 04-May-2022
Sample Name	: FLUE GAS STACK MONITORING			
Sample Condition	: GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED			
Quantity	: 2 NOS			
Ref.To Sampling Procedure:	: QSP-07			
Parameters	Unit	Standard Value	Results	Test Method
Location & Date : DRYER STACK-4 DT-26.04.2022				
Sulphur Dioxide	mg/Nm ³	-	34.5	IS 11255(part-2):1985(RA 2014)
Particulate Matter	mg/Nm ³	-	91.8	KLPL/SOP/AIR-06
Velocity	m/sec	-	8.83	KLPL/SOP/AIR-06
Stack Temperature in Deg kelvin	--	--	375	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm ³	--	41.8	IS 11255 (part-7):2005
Quantity of Gas Flow	Nm ³ / hr	-	5255.61	KLPL/SOP/AIR-06
Location & Date : GCP STACK DT-25.04.20220				
Sulphur Dioxide	mg/Nm ³	-	20.2	IS 11255(part-2):1985(RA 2014)
Particulate Matter	mg/Nm ³	-	69.5	KLPL/SOP/AIR-06
Velocity	m/sec	-	7.35	KLPL/SOP/AIR-06
Stack Temperature in Deg kelvin	--	--	363	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm ³	--	25.4	IS 11255 (part-7):2005
Quantity of Gas Flow	Nm ³ / hr	-	908.53	KLPL/SOP/AIR-06
Remarks	: NIL			
Any unusual feature observed during determination	: NIL			
***** End of Test Report *****				
Analysed By For Kalyani Laboratories Pvt. Ltd.			Authorised Signatory For Kalyani Laboratories Pvt. Ltd.	
				303A1234630072 KLPL- 355047A <small>Page 1 of 1</small>



KALYANI LABORATORIES PVT. LTD.

PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

NABL ULR NO : TC704322000012345P

TEST REPORT



Test Report No : 1313 | KLPL/4/22/ENVN/01650

Issue Date : 04-May-2022

Amendment No : -

Amendment Date : -

Reference : W.NO-MAT/80/36/1920 DATED 05.06.2019

Customer Name : FERRO ALLOYS CORPORATION LTD.

Address : CHARGE CHROME PLANT ,D.P. NAGAR, RANDIA-756135,BHADRAK,ODISHA.

Date of receipt : 30-Apr-2022 Commenced On : 30-Apr-2022

Completion On: 04-May-2022

Sample Name : AMBIENT AIR QUALITY MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

Quantity : 4 NOS

Ref.To Sampling Procedure: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
Location & Date : AUTO GARAGE DT-28-29.04.2022				
Sulphur Dioxide	µg/m ³	80	9.32	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m ³	80	15.91	IS 5182 (PART 6) :2006
Particulate Matter (PM10)	µg/m ³	100	68.09	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m ³	60	34.05	KLPL/SOP/AIR-02
Location & Date : FPHS & MRP PLANT DT-26-27.04.2022				
Sulphur Dioxide	µg/m ³	80	9.96	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m ³	80	17.60	IS 5182 (PART 6) :2006
Particulate Matter (PM10)	µg/m ³	100	71.14	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m ³	60	37.66	KLPL/SOP/AIR-02
Location & Date : MRSS & CPP DT-27-28.04.2022				
Sulphur Dioxide	µg/m ³	80	8.97	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m ³	80	14.68	IS 5182 (PART 6) :2006
Particulate Matter (PM10)	µg/m ³	100	76.25	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m ³	60	40.37	KLPL/SOP/AIR-02
Location & Date : R & C LAB DT-25-26.04.2022				
Sulphur Dioxide	µg/m ³	80	8.46	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m ³	80	16.62	IS 5182 (PART 6) :2006
Particulate Matter (PM10)	µg/m ³	100	62.24	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m ³	60	31.12	KLPL/SOP/AIR-02

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By
For Kalyani Laboratories Pvt. Ltd.



Authorised Signatory
For Kalyani Laboratories Pvt. Ltd.

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KALYANI LABORATORIES PVT. LTD.

PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

TEST REPORT



NABL ULR NO : TC704322000012560P

Test Report No : 1342 | KLPL/5/22/ENVN/01679 **Issue Date** : 20-May-2022

Amendment No : - **Amendment Date** : -

Reference : W.NO-MAT/80/36/1920 DATED 05.06.2019

Customer Name : FERRO ALLOYS CORPORATION LTD.

Address : CHARGE CHROME PLANT ,D.P. NAGAR, RANDIA-756135,BHADRAK,ODISHA.

Date of receipt : 18-May-2022 **Commenced On** : 18-May-2022 **Completion On** : 20-May-2022

Sample Name : AMBIENT AIR QUALITY MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

Quantity : 4 NOS

Ref.To Sampling Procedure : QSP-07

Parameters	Unit	Standard Value	Results	Test Method
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Location & Date : AUTO GARAGE DT-16-17.05.2022

Sulphur Dioxide	µg/m ³	80	7.62	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m ³	80	14.15	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m ³	100	66.68	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m ³	60	31.12	KLPL/SOP/AIR-02

Location & Date : FPHS & MRP PLANT DT-14-15.05.2022

Sulphur Dioxide	µg/m ³	80	9.27	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m ³	80	16.53	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m ³	100	75.24	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m ³	60	39.83	KLPL/SOP/AIR-02

Location & Date : MRSS & CPP DT-15-16.05.2022

Sulphur Dioxide	µg/m ³	80	9.44	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m ³	80	18.13	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m ³	100	68.98	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m ³	60	34.49	KLPL/SOP/AIR-02

Location & Date : R & C LAB DT-13-14.05.2022

Sulphur Dioxide	µg/m ³	80	8.54	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m ³	80	14.68	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m ³	100	67.28	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m ³	60	31.40	KLPL/SOP/AIR-02

Remarks : NIL

Any unusual feature observed during determination : NIL
 End of Test Report

D Anurag
 Analysed By
 For Kalyani Laboratories Pvt. Ltd.



Dasgupta
 Authorised Signatory
 For Kalyani Laboratories Pvt. Ltd.

31101256030420
KLPL- 3546124



KALYANI LABORATORIES PVT. LTD.

PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

TEST REPORT



NABL ULR NO : TC704322000012561P

Test Report No : 1343 | KLPL/5/22/ENVN/01680

Issue Date : 20-May-2022

Amendment No : -

Amendment Date : -

Reference : W.NO-MAT/80/36/1920 DATED 05.06.2019

Customer Name : FERRO ALLOYS CORPORATION LTD.

Address : CHARGE CHROME PLANT ,D.P. NAGAR, RANDIA-756135,BHADRAK,ODISHA.

Date of receipt : 18-May-2022 Commenced On : 18-May-2022 Completion On: 20-May-2022

Sample Name : FLUE GAS | STACK MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

Quantity : 2 NOS

Ref.To Sampling Procedure: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
Location & Date : DRYER STACK-4 DT-14.05.2022				
Sulphur Dioxide	mg/Nm ³	-	35.5	IS 11255(part-2):1985(RA 2014)
Particulate Matter	mg/Nm ³	-	92.4	KLPL/SOP/AIR-06
Velocity	m/sec	-	9.08	KLPL/SOP/AIR-06
Stack Temperature in Deg kelvin	--	--	380	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm ³	--	43.0	IS 11255 (part-7):2005
Quantity of Gas Flow	Nm ³ / hr	-	5367.71	KLPL/SOP/AIR-06
Location & Date : GCP STACK DT-13.05.2022				
Sulphur Dioxide	mg/Nm ³	-	15.5	IS 11255(part-2):1985(RA 2014)
Particulate Matter	mg/Nm ³	-	61.7	KLPL/SOP/AIR-06
Velocity	m/sec	-	7.78	KLPL/SOP/AIR-06
Stack Temperature in Deg kelvin	--	--	367	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm ³	--	20.2	IS 11255 (part-7):2005
Quantity of Gas Flow	Nm ³ / hr	-	973.10	KLPL/SOP/AIR-06

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory
For Kalyani Laboratories Pvt. Ltd.



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KLPL- 354641A of 1

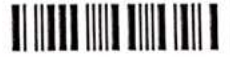


KALYANI LABORATORIES PVT. LTD.

PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

TEST REPORT



NABL ULR NO : TC704322000012927P

Test Report No : 1369 | KLPL/6/22/ENVN/01724

Issue Date : 30-Jun-2022

Amendment No : -

Amendment Date : -

Reference : PO NUMBER :4920054932,PO DATE :24.05.2022

Customer Name : FERRO ALLOYS CORPORATION LTD.

Address : CHARGE CHROME PLANT ,D.P. NAGAR, RANDIA-756135,BHADRAK,ODISHA.

Date of receipt : 27-Jun-2022 Commenced On : 27-Jun-2022 Completion On: 28-Jun-2022

Sample Name : FLUE GAS | STACK MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

Quantity : 1 NO

Ref.To Sampling Procedure: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
Location & Date	: DRYER STACK-4 DT-23.06.2022			
Sulphur Dioxide	mg/Nm ³	-	30.8	IS 11255(part-2):1985(RA 2014)
Oxide of Nitrogen as NOx	mg/Nm ³	-	38.6	KLPL/SOP/AIR-06
Particulate Matter	mg/Nm ³	-	88.3	KLPL/SOP/AIR-06
Carbon Monoxide (CO)	%	--	0.085	KLPL/SOP/AIR-06
Velocity	m/sec	-	7.68	KLPL/SOP/AIR-06
Stack Temperature in Deg kelvin	--	--	375	KLPL/SOP/AIR-06
carbon Dioxide	%	--	10.5	KLPL/SOP/AIR-06
Quantity of Gas Flow	Nm ³ / hr	-	5032.51	KLPL/SOP/AIR-06
Mercury	mg/Nm ³	--	0.021	KLPL/SOP/AIR-06

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

D Anupha
Analysed By
For Kalyani Laboratories Pvt. Ltd.



Madhavi
Authorised Signatory
For Kalyani Laboratories Pvt. Ltd.

327F1292731177
KLPL- 356133A of 1



KALYANI LABORATORIES PVT. LTD.

PLOT NO-78/94, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

TEST REPORT



NABL ULR NO : TC704322000012928P

Test Report No : 1370 | KLPL/6/22/ENVN/01725

Issue Date : 30-Jun-2022

Amendment No : -

Amendment Date : -

Reference : PO NUMBER :4920054932,PO DATE :24.05.2022

Customer Name : FERRO ALLOYS CORPORATION LTD.

Address : CHARGE CHROME PLANT ,D.P. NAGAR, RANDIA-756135,BHADRAK,ODISHA.

Date of receipt : 27-Jun-2022 Commenced On : 27-Jun-2022 Completion On: 28-Jun-2022

Sample Name : FLUE GAS | STACK MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

Quantity : 1 NO

Ref.To Sampling Procedure: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
Location & Date : GCP STACK DT-24.06.2022				
Sulphur Dioxide	mg/Nm ³	-	20.6	IS 11255(part-2):1985(RA 2014)
Oxide of Nitrogen as NOx	mg/Nm ³	-	25.6	KLPL/SOP/AIR-06
Particulate Matter	mg/Nm ³	-	66.4	KLPL/SOP/AIR-06
Carbon Monoxide (CO)	%	-	0.075	KLPL/SOP/AIR-06
Velocity	m/sec	-	7.02	KLPL/SOP/AIR-06
Stack Temperature in Deg kelvin	--	--	360	KLPL/SOP/AIR-06
carbon Dioxide	%	--	8.9	KLPL/SOP/AIR-06
Quantity of Gas Flow	Nm ³ / hr	-	910.25	KLPL/SOP/AIR-06
Mercury	mg/Nm ³	--	0.019	KLPL/SOP/AIR-06

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory
For Kalyani Laboratories Pvt. Ltd.



32801292831200

KLPL- 356132A of 1



KALYANI LABORATORIES PVT. LTD.

PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101. ODISHA

NABL ULR NO : TC704322000012929P

TEST REPORT



Test Report No : 1371 | KLPL/6/22/ENVN/01726 Issue Date : 30-Jun-2022
 Amendment No : - Amendment Date : -
 Reference : PO NUMBER : 4920054932, PO DATE : 24.05.2022
 Customer Name : FERRO ALLOYS CORPORATION LTD.
 Address : CHARGE CHROME PLANT ,D.P. NAGAR, RANDIA-756135,BHADRAK,ODISHA.
 Date of receipt : 27-Jun-2022 Commenced On : 27-Jun-2022 Completion On: 28-Jun-2022

Sample Name : FLUE GAS | STACK MONITORING
 Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED
 Quantity : 1 NO
 Ref.To Sampling Procedure: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
Location & Date : DEDUSTING SYSTEM - 25.06.2022				
Sulphur Dioxide	mg/Nm ³	-	14.8	IS 11255(part-2):1985(RA 2014)
Oxide of Nitrogen as NOx	mg/Nm ³	-	19.8	KLPL/SOP/AIR-06
Particulate Matter	mg/Nm ³	-	54.7	KLPL/SOP/AIR-06
Carbon Monoxide (CO)	%	--	0.066	KLPL/SOP/AIR-06
Velocity	m/sec	-	7.26	KLPL/SOP/AIR-06
Stack Temperature in Deg kelvin	--	--	305	KLPL/SOP/AIR-06
carbon Dioxide	%	--	8.3	KLPL/SOP/AIR-06
Quantity of Gas Flow	Nm ³ / hr	-	1014.67	KLPL/SOP/AIR-06
Mercury	mg/Nm ³	--	0.016	KLPL/SOP/AIR-06

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

D Asutcha
 Analysed By
 For Kalyani Laboratories Pvt. Ltd.

[Signature]
 Authorised Signatory
 For Kalyani Laboratories Pvt. Ltd.



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 KLPL- 356131A of 1



Kalyani Laboratories

KALYANI LABORATORIES PVT. LTD.

PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

TEST REPORT



NABL ULR NO : TC704322000012965P

Test Report No : 5729 | 1493632A5KLPL/6/22/WATER/06807 Issue Date: 02-Jul-2022

Amendment No : - Amendment Date : -

Reference : PO NUMBER :4920054932,PO DATE :24.05.2022

Customer Name : FERRO ALLOYS CORPORATION LTD.

Address : CHARGE CHROME PLANT ,D.P. NAGAR, RANDIA-756135,BHADRAK,ODISHA.

Date of receipt : 27-Jun-2022 Test Commenced On : 27-Jun-2022 Test Completion On: 30-Jun-2022

Sample Description : DRINKING WATER (IS 10500:2012)

Sample Condition : SEALED

Sample Identification * : DRINKING WATER

Sampling Date : 25-Jun-2022

Batch No , Lot No : NA

MFG Date : NA

EXP Date : NA

Received Quantity : 1LTR X 5

Place of Collection :--

Sample Collected By : By KLPL

Ref.To Sampling Procedure: QSP-07

Parameters	Unit	Requirement	Result	Test Method
BACTERIOLOGICAL QUALITY				
i E.coli	MPN/100ml.	Shall not be detected in any100ml. Sample	<2	IS 1622:1981 RA 2009
ii Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
CHEMICAL PARAMETER				
i Chloride (as Cl)	mg/l, Max	250	36	IS 3025 (Part 32):1988 RA 2009
ii Free residual chlorine	mg/l, Min	0.2	<0.04	IS 3025 (Part 26):1986 RA 2009
iii Iron (as Fe)	mg/l, Max	1	<0.05	IS 3025 (Part 53):2003 RA 2014
iv Total hardness (as CaCO3),	mg/l, Max	200	164	IS 3025 (Part 21):2009
v Nitrate as NO3	mg/l, Max	45	0.45	IS 3025 (PART 34): 1988 RA 2003
vi Calcium (as Ca)	mg/l, Max	75	56	IS 3025 (Part 40):1991 RA 2009
vii Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
viii Fluoride (as F)	mg/l, Max	1	0.6	IS 3025 (Part 60):2008
ix Magnesium (as Mg)	mg/l, Max	30	5.83	IS 3025 (Part 46):1994 RA 2003
x Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xi Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xii Sulphate (as SO4)	mg/l, Max	200	22	IS 3025 (Part 24):1986 RA 2009
xiii Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2003
xiv Mineral oil	mg/l, Max	0.5	<0.5	Clause 6 of IS 3025 (Part- 39):1991 RA 2003
xv Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xvi Total alkalinity (as CaCO3),	mg/l, Max	200	170	IS 3025 (Part 23):1986 RA 2009
xvii Zinc (as Zn)	mg/l, Max	5	<0.05	IS 3025 (Part 49):1994 RA 2009
xviii Sulphide	mg/l, Max	0.05	<0.05	APHA 22nd Edition (4500-S2--F)
xix Aluminum (as Al)	mg/l,Max	0.03	<0.02	IS 3025 (part-55)
xx Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009



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KLPL- 356045A



KALYANI LABORATORIES PVT. LTD.

PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

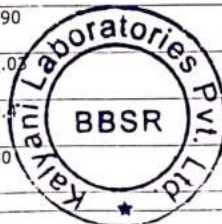
Test Report No : 5729 | 1493632A5KLPL/6/22/WATER/06807



Parameters	Unit	Requirement	Result	Test Method
xxi Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxii Chromium (as Cr)	mg/l, Max	0.05	<0.02	Annex J OF IS 13428 : 2005 RA 2009
xxiii Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxiv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009
xxv Molybdenum (as Mo)	mg/l, Max	0.07	<0.02	IS 3025 (Part 2): 2002
xxvi Chloramines (Cl ₂)	mg/l, Max	0.2	<1.0	IS 3025 (Part 26):2009
xxvii Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xxviii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxix Polychlorinatedbiphenyls	mg/l, Max	0.0005	<0.00005	APHA 22nd Edition 6630
xxx Bromoform	mg/l, Max	0.1	<0.1	APHA 22nd Edition 6232
xxxI Dibromochloromethane	mg/l, Max	0.1	<0.1	APHA 22nd Edition 6232
xxxII Chloroform	mg/l, Max	0.1	<0.2	APHA 22nd Edition 6232
xxxIII Bromodichloromethane	mg/l, Max	0.1	<0.06	APHA 22nd Edition 6232

PESTISIDE

i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii a-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii β -HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiii Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xiv Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xv Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xvi Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xvii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xviii Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xix Aldrin	µg/l, Max	0.05	<0.01	USEPA 508
xx Endosulfan β	µg/l, Max	0.4	<0.01	USEPA 508
xxi 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1



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KLPL- 356044A

Test Report No : 5729 | 1493632ASKLPL/6/22/WATER/06807



Parameters	Unit	Requirement	Result	Test Method
xxii Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xxiii Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxiv Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxv Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Ethion(Residue to be Determined as ethion and its oxygen analogue and expressed as ethion)	µg/l, Max	3.0	<0.01	USEPA 1657 A
PHYSICAL PARAMETER				
i Colour.	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii Odour	--	Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value	---	6.5-8.5	6.9	IS 3025 (Part-11):1983, RA 2012
iv Taste	--	Agreeable	AGREEABLE	IS 3025 (Parts 8):1984 RA 2006
v Turbidity	NTU, Max	1	0.7	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	310	IS 3025 (Part 16):1984 RA 2006
TOXIC SUBSTANCES				
i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks :

Any unusual feature observed during determination :

..... End of Test Report

D Ashika
Analysed By
For Kalyani Laboratories Pvt. Ltd.



[Signature]
Authorized Signatory
For Kalyani Laboratories Pvt. Ltd



KALYANI LABORATORIES PVT. LTD.

PLOT NO-78944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

TEST REPORT



NABL ULR NO : TC704322000012966P
Test Report No : 5730 | 1494632A6KLPL/6/22/WATER/06808 **Issue Date:** 02-Jul-2022
Amendment No : - **Amendment Date** : -
Reference : PO NUMBER :4920054932,PO DATE :24.05.2022
Customer Name : FERRO ALLOYS CORPORATION LTD.
Address : CHARGE CHROME PLANT ,D.P. NAGAR, RANDIA-756135,BHADRAK,ODISHA.
Date of receipt : 27-Jun-2022 **Test Commenced On** : 27-Jun-2022 **Test Completion On:** 30-Jun-2022
Sample Description : WASTE WATER

Sample Condition : SEALED
Sample Identification * : WASTE WATER **Sampling Date** : 25-Jun-2022
Batch No , Lot No : NA **MFG Date** : NA **EXP Date** : NA
Received Quantity : 1LTR X 4 **Place of Collection** :MRP POND,DATE-25.06.2022
Sample Collected By : By KLPL
Ref.To Sampling Procedure: QSP-07

Parameters	Unit	Requirement	Result	Test Method
CHEMICAL PARAMETER				
i Total Suspended Solids	mg/l	--	10	APHA-23rd Edition (2540 D), 2017
ii Temperature	°c	--	24	APHA-23rd Edition 2017
iii Oil & Grease	mg/l	--	<0.025	APHA-23rd Edition (5520 B) 2017
iv Chemical Oxygen Demand	mg/l	-	35	APHA 23rd Edition (5220 B), 2017
v Biochemical Oxygen Demand(For 3 days 27deg C)	mg/l	--	7	APHA 23rd Edition 2012(5210 B), 2017
vi Free Ammonia (as NH3)	mg/l	---	<0.03	APHA-23rd Edition (4500-NH3-B) 2017
vii Ammonical Nitrogen (as NH3-N)	mg/l	---	<0.3	APHA-23rd Edition (4500-NH3-B) 2017
viii Total Kjeldhal Nitrogen	mg/l	---	<0.1	APHA-23rd Edition (4500-Norg-B) 2017
ix Residual Chlorine	mg/l	---	<0.04	APHA-23rd Edition (4500-Cl-B) 2017
x Copper (as Cu)	mg/l	--	<0.02	IS 3025 (Part 42):1992 RA 2009
xi Selenium (as Se)	mg/l	--	<0.005	IS 3025 (Part 56):2003 RA 2009
xii Zinc (as Zn)	mg/l	--	<0.05	IS 3025 (Part 49):1994 RA 2009
xiii Total Chromium	mg/l	--	<0.02	IS 3025 (Part 52):2003 RA 2009
xiv Hexavalent Chromium (as Cr+6)	mg/l	--	<0.05	APHA-23rd Edition (3500-Cr-B)2017
xv Fluoride as F	mg/l	--	0.7	APHA 23rd Edition (4500-F - -D,-C), 2017
xvi Iron (as Fe)	mg/l	--	1.2	APHA-23rd Edition (3500-Fe-B , 3111 B) 2017
xvii Manganese (as Mn)	mg/l	--	<0.05	IS 3025 (Part 59):2006 RA 2012
xviii Phenolic compounds (as C6H5OH)	mg/l	--	<0.001	IS 3025 (Part 43):1992 RA 2009
xix Bioassay	%	--	90%	IS 6582
xx Sulphide (as S)	mg/l	---	<0.01	APHA-22nd Edition (4500-S2--F)
xxi Dissolved Phosphate (as P)	mg/l	---	<0.1	APHA-23rd Edition (4500-P-D) 2017
xxii Nitrate Nitrogen	mg/l	--	1.0	APHA 23rd Edition (2320 B), 2017



PHYSICAL PARAMETER

Test Report No : 5730 | 1494632A6KLPL/6/22/WATER/06808

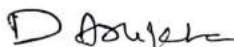


Parameters	Unit	Requirement	Result	Test Method
i Odour	--	--	AGREEABLE	APHA 23rd Edition (2120 B), 2017
ii Colour.	Hazen	--	<1.0	APHA 23rd Edition (2120 B),2017
iii pH Value	--	--	7.1	APHA 23rd Edition (4500-H+-B), 2017
RADIOACTIVITY SUBSTANCES				
i Gross Alpha-activity	uC/mL	--	BDL	IS 14194 (PART-2):2013
ii Gross Beta-activity	uC/mL	--	BDL	IS 14194 (PART-1):2013
TOXIC SUBSTANCES				
i Cadmium (as Cd)	mg/l	--	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Lead (as Pb)	mg/l	--	<0.005	IS 3025 (Part 47):1994 RA 2009
iii Mercury (as Hg)	mg/l	--	<0.0005	IS 3025 (Part 48):1994 RA 2009
iv Arsenic (as As)	mg/l	--	<0.001	IS 3025 (Part 37):1988 RA 2009
v Cyanide (as CN)	mg/l	--	<0.02	IS 3025 (Part 27) :1986 RA 2003
vi Nickel (as Ni)	mg/l	---	<0.01	IS 3025 (Part 54):2003 RA 2009


Remarks :

Any unusual feature observed during determination :

End of Test Report


Analysed By
For Kalyani Laboratories Pvt. Ltd.




Authorized Signatory
For Kalyani Laboratories Pvt. Ltd



KALYANI LABORATORIES PVT. LTD.

PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

TEST REPORT



NABL ULR NO : TC704322000012902P

Test Report No : 1362 | KLPL/6/22/ENVN/01723

Issue Date : 30-Jun-2022

Amendment No : -

Amendment Date : -

Reference : PO NUMBER : 4920054932, PO DATE : 24.05.2022

Customer Name : FERRO ALLOYS CORPORATION LTD.

Address : CHARGE CHROME PLANT ,D.P. NAGAR, RANDIA-756135, BHADRAK, ODISHA.

Date of receipt : 27-Jun-2022 Commenced On : 27-Jun-2022 Completion On: 30-Jun-2022

Sample Name : AMBIENT AIR QUALITY MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

Quantity : 4 NOS

Ref.To Sampling Procedure: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
------------	------	----------------	---------	-------------

Location & Date : AUTO GARAGE DT-25-26.06.2022

Sulphur Dioxide	µg/m ³	80	6.13	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m ³	80	12.44	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m ³	100	55.80	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m ³	60	30.05	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m ³	04	0.355	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m ³	180	3.7	KLPL/SOP/AIR-19
Lead (Pb)	µg/m ³	1.0	<0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m ³	400	<10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m ³	05	<1	KLPL/SOP/AIR-07
Benza (a) Pyrene (BaP)	ng/m ³	01	<1	KLPL/SOP/AIR-07
Arsenic (As)	ng/m ³	06	<1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m ³	20	<4	KLPL/SOP/AIR-10

Location & Date : FPHS & MRP PLANT DT-23-24.06.2022

Sulphur Dioxide	µg/m ³	80	7.29	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m ³	80	13.81	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m ³	100	71.74	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m ³	60	37.98	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m ³	04	0.371	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m ³	180	3.8	KLPL/SOP/AIR-19
Lead (Pb)	µg/m ³	1.0	<0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m ³	400	<10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m ³	05	<1	KLPL/SOP/AIR-07
Benza (a) Pyrene (BaP)	ng/m ³	01	<1	KLPL/SOP/AIR-07
Arsenic (As)	ng/m ³	06	<1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m ³	20	<4	KLPL/SOP/AIR-10



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KLPL- 356040A

TEST REPORT



NABL ULR NO : TC704322000012902P

Test Report No : 1362 | KLPL/6/22/ENVN/01723

Issue Date : 30-Jun-2022

Amendment No : -

Amendment Date : -

Reference : PO NUMBER :4920054932,PO DATE :24.05.2022

Customer Name : FERRO ALLOYS CORPORATION LTD.

Address : CHARGE CHROME PLANT ,D.P. NAGAR, RANDIA-756135,BHADRAK,ODISHA.

Date of receipt : 27-Jun-2022 **Commenced On** : 27-Jun-2022 **Completion On**: 30-Jun-2022

Sample Name : AMBIENT AIR QUALITY MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

Quantity : 4 NOS

Ref.To Sampling Procedure: QSP--07

Parameters	Unit	Standard Value	Results	Test Method
------------	------	----------------	---------	-------------

Location & Date : MRSS & CPP DT-24-25.06.2022

Sulphur Dioxide	µg/m ³	80	8.76	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m ³	80	15.65	IS 5182 (PART 6) :2006
Particulate Matter (PM10)	µg/m ³	100	66.95	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m ³	60	31.48	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m ³	04	0.366	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m ³	180	5.3	KLPL/SOP/AIR-19
Lead (Pb)	µg/m ³	1.0	<0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m ³	400	<10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m ³	05	<1	KLPL/SOP/AIR-07
Benza (a) Pyrene (BaP)	ng/m ³	01	<1	KLPL/SOP/AIR-07
Arsenic (As)	ng/m ³	06	<1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m ³	20	4.4	KLPL/SOP/AIR-10

Location & Date : R & C LAB DT-22-23.06.2022

Sulphur Dioxide	µg/m ³	80	7.29	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m ³	80	9.55	IS 5182 (PART 6) :2006
Particulate Matter (PM10)	µg/m ³	100	58.58	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m ³	60	29.29	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m ³	04	0.358	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m ³	180	2.8	KLPL/SOP/AIR-19
Lead (Pb)	µg/m ³	1.0	<0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m ³	400	<10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m ³	05	<1	KLPL/SOP/AIR-07
Benza (a) Pyrene (BaP)	ng/m ³	01	<1	KLPL/SOP/AIR-07
Arsenic (As)	ng/m ³	06	<1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m ³	20	<4	KLPL/SOP/AIR-10



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KLPL- 356039A



KALYANI LABORATORIES PVT. LTD.

PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

TEST REPORT



NABL ULR NO : TC704322000012902P

Test Report No : 1362 | KLPL/6/22/ENVN/01723

Issue Date : 30-Jun-2022

Amendment No : -

Amendment Date : -

Reference : PO NUMBER : 4920054932, PO DATE : 24.05.2022

Customer Name : FERRO ALLOYS CORPORATION LTD.

Address : CHARGE CHROME PLANT, D.P. NAGAR, RANDIA-756135, BHADRAK, ODISHA.

Date of receipt : 27-Jun-2022 Commenced On : 27-Jun-2022 Completion On: 30-Jun-2022

Sample Name : AMBIENT AIR QUALITY MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

Quantity : 4 NOS

Ref. To Sampling Procedure: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
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Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

D. Anusha
Analysed By
For Kalyani Laboratories Pvt. Ltd.



Randhawa
Authorised Signatory
For Kalyani Laboratories Pvt. Ltd.

32661290231146
KLPL- 356038A



KALYANI LABORATORIES PVT. LTD.

PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

NABL ULR NO : TC704322000012915P

TEST REPORT



Test Report No : 1363 | KLPL/6/22/ENVN/01727

Issue Date : 30-Jun-2022

Amendment No : -

Amendment Date : -

Reference : PO NUMBER :4920054932,PO DATE :24.05.2022

Customer Name : FERRO ALLOYS CORPORATION LTD.

Address : CHARGE CHROME PLANT ,D.P. NAGAR, RANDIA-756135,BHADRAK,ODISHA.

Date of receipt : 27-Jun-2022

Commenced On : 27-Jun-2022

Completion On: 28-Jun-2022

Sample Name : NOISE

Sample Condition : --

Quantity : 17 NOS

Ref.To Sampling Procedure: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
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Location & Date : OHC - 24.06.2022

Noise Level Indl. Area (Day)	dB	--	50.1	IS 9989:1981 (RA 2014)
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Noise Level Indl. Area (Night)	dB	--	41.6	IS 9989:1981 (RA 2014)
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Location & Date : NEAR 45MVA FURNACE - 23.06.2022

Noise Level Indl. Area (Day)	dB	--	76.3	IS 9989:1981 (RA 2014)
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Noise Level Indl. Area (Night)	dB	--	69.2	IS 9989:1981 (RA 2014)
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Location & Date : NEAR ADMINISTRATIVE BUILDING - 22.06.2022

Noise Level Indl. Area (Day)	dB	--	58.4	IS 9989:1981 (RA 2014)
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Noise Level Indl. Area (Night)	dB	--	49.2	IS 9989:1981 (RA 2014)
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Location & Date : NEAR AGGLOMERATION PLANT - 22.06.2022

Noise Level Indl. Area (Day)	dB	--	83.1	IS 9989:1981 (RA 2014)
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Noise Level Indl. Area (Night)	dB	--	73.2	IS 9989:1981 (RA 2014)
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Location & Date : NEAR AUTO GARAGE- 24.06.2022

Noise Level Indl. Area (Day)	dB	--	60.2	IS 9989:1981 (RA 2014)
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Noise Level Indl. Area (Night)	dB	--	52.6	IS 9989:1981 (RA 2014)
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Location & Date : NEAR BRIQUETTE STORAGE AREA - 23.06.2022

Noise Level Indl. Area (Day)	dB	--	74.0	IS 9989:1981 (RA 2014)
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Noise Level Indl. Area (Night)	dB	--	66.2	IS 9989:1981 (RA 2014)
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Location & Date : NEAR CENTRAL STORE - 23.06.2022

Noise Level Indl. Area (Day)	dB	--	55.8	IS 9989:1981 (RA 2014)
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Noise Level Indl. Area (Night)	dB	--	43.7	IS 9989:1981 (RA 2014)
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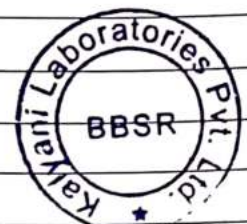
Location & Date : NEAR DRYER PLANT (AGGLOMERATION) - 23.06.2022

Noise Level Indl. Area (Day)	dB	--	84.6	IS 9989:1981 (RA 2014)
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Noise Level Indl. Area (Night)	dB	--	75.7	IS 9989:1981 (RA 2014)
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Location & Date : NEAR FACOR COLONEY - 22.06.2022

Noise Level Indl. Area (Day)	dB	--	52.3	IS 9989:1981 (RA 2014)
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KLPL- 356037A



KALYANI LABORATORIES PVT. LTD.

PLOT NO-78,944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

TEST REPORT



NABL ULR NO : TC704322000012915P
Test Report No : 1363 | KLPL/6/22/ENVN/01727
Amendment No : -
Reference : PO NUMBER :4920054932,PO DATE :24.05.2022
Customer Name : FERRO ALLOYS CORPORATION LTD.
Address : CHARGE CHROME PLANT ,D.P. NAGAR, RANDIA-756135,BHADRAK,ODISHA.
Date of receipt : 27-Jun-2022
Commenced On : 27-Jun-2022
Completion On : 28-Jun-2022
Issue Date : 30-Jun-2022
Amendment Date : -
Sample Name : NOISE
Sample Condition : --
Quantity : 17 NOS
Ref.To Sampling Procedure: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
Location & Date : NEAR FINISHED PRODUCT HANDLING- 24.06.2022				
Noise Level Indl. Area (Night)	dB	--	44.0	IS 9989:1981 (RA 2014)
Location & Date : NEAR GCP- 23.06.2022				
Noise Level Indl. Area (Day)	dB	--	73.9	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	--	60.9	IS 9989:1981 (RA 2014)
Location & Date : NEAR MAIN GATE - 22.06.2022				
Noise Level Indl. Area (Day)	dB	--	58.7	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	--	47.9	IS 9989:1981 (RA 2014)
Location & Date : NEAR MATERIAL RECOVERY PLANT - 23.06.2022				
Noise Level Indl. Area (Day)	dB	--	81.4	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	--	72.6	IS 9989:1981 (RA 2014)
Location & Date : NEAR MRSS SWITCH YARD - 23.06.2022				
Noise Level Indl. Area (Day)	dB	--	66.3	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	-	57.4	IS 9989:1981 (RA 2014)
Location & Date : NEAR STORAGE AREA - 24.06.2022				
Noise Level Indl. Area (Day)	dB	--	53.1	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	-	42.6	IS 9989:1981 (RA 2014)
Location & Date : NEAR TEMPLE GATE - 22.06.2022				
Noise Level Indl. Area (Day)	dB	--	88.4	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	--	78.6	IS 9989:1981 (RA 2014)
Location & Date : NEAR WATER COOLING TOWER AREA- 24.06.2022				
Noise Level Indl. Area (Day)	dB	--	80.1	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	-	71.6	IS 9989:1981 (RA 2014)



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KLPL- 356036A



KALYANI LABORATORIES PVT. LTD.

PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

TEST REPORT



NABL ULR NO : TC704322000012915P

Test Report No : 1363 | KLPL/6/22/ENVN/01727

Issue Date : 30-Jun-2022

Amendment No : -

Amendment Date : -

Reference : PO NUMBER :4920054932,PO DATE :24.05.2022

Customer Name : FERRO ALLOYS CORPORATION LTD.

Address : CHARGE CHROME PLANT ,D.P. NAGAR, RANDIA-756135,BHADRAK,ODISHA.

Date of receipt : 27-Jun-2022 Commenced On : 27-Jun-2022 Completion On: 28-Jun-2022

Sample Name : NOISE

Sample Condition : --

Quantity : 17 NOS

Ref.To Sampling Procedure: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
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Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

D. Anilcha

Analysed By
For Kalyani Laboratories Pvt. Ltd.

m. jayaram

Authorised Signatory
For Kalyani Laboratories Pvt. Ltd.



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KLPL- 356035A



KALYANI LABORATORIES PVT. LTD.

PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

TEST REPORT



NABL ULR NO : TC704322000013317P

Test Report No : 1417 | KLPL/7/22/ENVN/01771

Issue Date : 02-Aug-2022

Amendment No : -

Amendment Date : -

Reference : PO NUMBER :4920054932,PO DATE :24.05.2022

Customer Name : FERRO ALLOYS CORPORATION LTD.

Address : CHARGE CHROME PLANT ,D.P. NAGAR, RANDIA-756135,BHADRAK,ODISHA.

Date of receipt : 30-Jul-2022 Commenced On : 30-Jul-2022 Completion On: 02-Aug-2022

Sample Name : AMBIENT AIR QUALITY MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

Quantity : 4 NOS

Ref.To Sampling Procedure: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
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Location & Date : AUTO GARAGE DT-29-30.07.2022

Sulphur Dioxide	µg/m ³	80	6.38	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m ³	80	15.87	IS 5182 (PART 6) :2006
Particulate Matter (PM10)	µg/m ³	100	62.51	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m ³	60	31.26	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m ³	04	0.362	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m ³	180	3.8	KLPL/SOP/AIR-19
Lead (Pb)	µg/m ³	1.0	<0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m ³	400	<10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m ³	05	<1	KLPL/SOP/AIR-07
Benza (a) Pyrene (BaP)	ng/m ³	01	<1	KLPL/SOP/AIR-07
Arsenic (As)	ng/m ³	06	<1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m ³	20	<4	KLPL/SOP/AIR-10

Location & Date : FPHS & MRP PLANT DT-27-28.07.2022

Sulphur Dioxide	µg/m ³	80	8.07	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m ³	80	15.85	IS 5182 (PART 6) :2006
Particulate Matter (PM10)	µg/m ³	100	63.57	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m ³	60	38.80	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m ³	04	0.363	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m ³	180	3.9	KLPL/SOP/AIR-19
Lead (Pb)	µg/m ³	1.0	<0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m ³	400	<10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m ³	05	<1	KLPL/SOP/AIR-07
Benza (a) Pyrene (BaP)	ng/m ³	01	<1	KLPL/SOP/AIR-07
Arsenic (As)	ng/m ³	06	<1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m ³	20	<4	KLPL/SOP/AIR-10



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KLPL- 357329A of 3



KALYANI LABORATORIES PVT. LTD.

PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

TEST REPORT



NABL ULR NO : TC704322000013317P

Test Report No : 1417 | KLPL/7/22/ENVN/01771

Issue Date : 30-Jul-2022

Amendment No : -

Amendment Date : -

Reference : PO NUMBER :4920054932,PO DATE :24.05.2022

Customer Name : FERRO ALLOYS CORPORATION LTD.

Address : CHARGE CHROME PLANT ,D.P. NAGAR, RANDIA-756135,BHADRAK,ODISHA.

Date of receipt : 30-Jul-2022 Commenced On : 30-Jul-2022

Completion On: 02-Aug-2022

Sample Name : AMBIENT AIR QUALITY MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

Quantity : 4 NOS

Ref.To Sampling Procedure: QSP-07

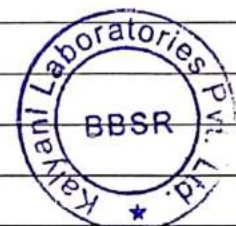
Parameters	Unit	Standard Value	Results	Test Method
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Location & Date : MRSS & CPP DT-28-29.07.2022

Sulphur Dioxide	µg/m ³	80	9.27	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m ³	80	18.62	IS 5182 (PART 6) :2006
Particulate Matter (PM10)	µg/m ³	100	66.39	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m ³	60	39.83	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m ³	04	0.366	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m ³	180	6.4	KLPL/SOP/AIR-19
Lead (Pb)	µg/m ³	1.0	<0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m ³	400	<10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m ³	05	<1	KLPL/SOP/AIR-07
Benza (a) Pyrene (BaP)	ng/m ³	01	<1	KLPL/SOP/AIR-07
Arsenic (As)	ng/m ³	06	<1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m ³	20	<4	KLPL/SOP/AIR-10

Location & Date : R & C LAB DT-26-27.07.2022

Sulphur Dioxide	µg/m ³	80	7.45	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m ³	80	12.20	IS 5182 (PART 6) :2006
Particulate Matter (PM10)	µg/m ³	100	56.53	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m ³	60	30.05	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m ³	04	0.356	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m ³	180	2.9	KLPL/SOP/AIR-19
Lead (Pb)	µg/m ³	1.0	<0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m ³	400	<10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m ³	05	<1	KLPL/SOP/AIR-07
Benza (a) Pyrene (BaP)	ng/m ³	01	<1	KLPL/SOP/AIR-07
Arsenic (As)	ng/m ³	06	<1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m ³	20	<4	KLPL/SOP/AIR-10



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KLPL- 357328A³



KALYANI LABORATORIES PVT. LTD.

PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

TEST REPORT



NABL ULR NO : TC704322000013317P

Test Report No : 1417 | KLPL/7/22/ENVN/01771

Issue Date : 30-Jul-2022

Amendment No : -

Amendment Date : -

Reference : PO NUMBER :4920054932,PO DATE :24.05.2022

Customer Name : FERRO ALLOYS CORPORATION LTD.

Address : CHARGE CHROME PLANT ,D.P. NAGAR, RANDIA-756135,BHADRAK,ODISHA.

Date of receipt : 30-Jul-2022 Commenced On : 30-Jul-2022 Completion On: 02-Aug-2022

Sample Name : AMBIENT AIR QUALITY MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

Quantity : 4 NOS

Ref.To Sampling Procedure: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
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Remarks : -

Any unusual feature observed during determination :

End of Test Report

D Anubh

Analysed By
For Kalyani Laboratories Pvt. Ltd.

Madhance

Authorised Signatory
For Kalyani Laboratories Pvt. Ltd.



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KLPL- 357327A3



KALYANI LABORATORIES PVT. LTD.

PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

NABL ULR NO : TC704322000013399P

TEST REPORT



Test Report No : 1425 | KLPL/7/22/ENVN/01773 Issue Date : 04-Aug-2022
 Amendment No : - Amendment Date : -
 Reference : PO NUMBER : 4920054932, PO DATE : 24.05.2022
 Customer Name : FERRO ALLOYS CORPORATION LTD.
 Address : CHARGE CHROME PLANT ,D.P. NAGAR, RANDIA-756135, BHADRAK, ODISHA.
 Date of receipt : 28-Jul-2022 Commenced On : 28-Jul-2022 Completion On: 30-Jul-2022

Sample Name : FLUE GAS | STACK MONITORING
 Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED
 Quantity : 3 NOS
 Ref. To Sampling Procedure: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
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Location & Date : DEDUSTING SYSTEM - 28.07.2022				
Sulphur Dioxide	mg/Nm ³	-	NIL	IS 11255(part-2):1985(RA 2014)
Oxide of Nitrogen as NOx	mg/Nm ³	-	NIL	KLPL/SOP/AIR-06
Particulate Matter	mg/Nm ³	-	NIL	KLPL/SOP/AIR-06
Carbon Monoxide	%	--	NIL	KLPL/SOP/AIR-06
Velocity	m/sec	-	NIL	KLPL/SOP/AIR-06
Stack Temperature in Deg kelvin	--	--	NIL	KLPL/SOP/AIR-06
carbon Dioxide	%	--	NIL	KLPL/SOP/AIR-06
Quantity of Gas Flow	Nm ³ / hr	-	NIL	KLPL/SOP/AIR-06
Mercury	mg/Nm ³	--	NIL	KLPL/SOP/AIR-06

Location & Date : DRYER STACK-4 DT-27.07.2022				
Sulphur Dioxide	mg/Nm ³	-	NIL	IS 11255(part-2):1985(RA 2014)
Oxide of Nitrogen as NOx	mg/Nm ³	-	NIL	KLPL/SOP/AIR-06
Particulate Matter	mg/Nm ³	-	NIL	KLPL/SOP/AIR-06
Carbon Monoxide	%	--	NIL	KLPL/SOP/AIR-06
Velocity	m/sec	-	NIL	KLPL/SOP/AIR-06
Stack Temperature in Deg kelvin	--	--	NIL	KLPL/SOP/AIR-06
carbon Dioxide	%	--	NIL	KLPL/SOP/AIR-06
Quantity of Gas Flow	Nm ³ / hr	-	NIL	KLPL/SOP/AIR-06
Mercury	mg/Nm ³	--	NIL	KLPL/SOP/AIR-06

Location & Date : GCP STACK DT-27.07.2022				
Sulphur Dioxide	mg/Nm ³	-	NIL	IS 11255(part-2):1985(RA 2014)
Oxide of Nitrogen as NOx	mg/Nm ³	-	NIL	KLPL/SOP/AIR-06
Particulate Matter	mg/Nm ³	-	NIL	KLPL/SOP/AIR-06
Carbon Monoxide	%	--	NIL	KLPL/SOP/AIR-06
Velocity	m/sec	-	NIL	KLPL/SOP/AIR-06



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 KLPL- 356362A2



KALYANI LABORATORIES PVT. LTD.

PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

TEST REPORT



NABL ULR NO : TC704322000013399P

Test Report No : 1425 | KLPL/7/22/ENVN/01773

Issue Date : 04-Aug-2022

Amendment No : -

Amendment Date : -

Reference : PO NUMBER :4920054932,PO DATE :24.05.2022

Customer Name : FERRO ALLOYS CORPORATION LTD.

Address : CHARGE CHROME PLANT ,D.P. NAGAR, RANDIA-756135,BHADRAK,ODISHA.

Date of receipt : 28-Jul-2022 Commenced On : 28-Jul-2022 Completion On: 30-Jul-2022

Sample Name : FLUE GAS | STACK MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

Quantity : 3 NOS

Ref.To Sampling Procedure: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
Stack Temperature in Deg kelvin	--	--	NIL	KLPL/SOP/AIR-06
carbon Dioxide	%	--	NIL	KLPL/SOP/AIR-06
Quantity of Gas Flow	Nm3 / hr	--	NIL	KLPL/SOP/AIR-06
Mercury	mg/Nm3	--	NIL	KLPL/SOP/AIR-06

Remarks : PLANT SHUTDOWN

Any unusual feature observed during determination :

End of Test Report

D Arukha

Analysed By
For Kalyani Laboratories Pvt. Ltd.

D Arukha

Authorised Signatory
For Kalyani Laboratories Pvt. Ltd.



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KLPL- 356361A



KALYANI LABORATORIES PVT. LTD.

PLOT NO-78/94, MILLENIUM CITY PALAL, BHUBANESWAR-752101, ODISHA

TEST REPORT



NABL ULR NO : TC704322000013330P
Test Report No : 1419 | KLPL/7/22/ENVN/01772
Amendment No : -
Reference : PO NUMBER :4920054932,PO DATE :24.05.2022
Customer Name : FERRO ALLOYS CORPORATION LTD.
Address : CHARGE CHROME PLANT ,D.P. NAGAR, RANDIA-756135,BHADRAK,ODISHA.
Date of receipt : 30-Jul-2022 Commenced On : 30-Jul-2022 **Completion On:** 01-Aug-2022
Issue Date : 02-Aug-2022
Amendment Date : -
Sample Name : NOISE
Sample Condition : --
Quantity : 17 NOS
Ref.To Sampling Procedure: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
Noise Level Indl. Area (Night)	dB	-	59.2	IS 9989:1981 (RA 2014)
Location & Date : NEAR GCP- 27.07.2022				
Noise Level Indl. Area (Day)	dB	-	78.4	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	-	72.1	IS 9989:1981 (RA 2014)
Location & Date : NEAR MAIN GATE - 26.07.2022				
Noise Level Indl. Area (Day)	dB	-	59.6	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	-	48.8	IS 9989:1981 (RA 2014)
Location & Date : NEAR MATERIAL RECOVERY PLANT - 27.07.2022				
Noise Level Indl. Area (Day)	dB	-	75.6	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	-	66.8	IS 9989:1981 (RA 2014)
Location & Date : NEAR MRSS SWITCH YARD - 27.07.2022				
Noise Level Indl. Area (Day)	dB	-	65.1	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	-	56.3	IS 9989:1981 (RA 2014)
Location & Date : NEAR STORAGE AREA - 28.07.2022				
Noise Level Indl. Area (Day)	dB	-	50.8	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	-	40.1	IS 9989:1981 (RA 2014)
Location & Date : NEAR VEHICLE PARKING AREA- 26.07.2022				
Noise Level Indl. Area (Day)	dB	-	48.2	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	-	41.6	IS 9989:1981 (RA 2014)
Location & Date : NEAR WATER COOLING TOWER AREA- 28.07.2022				
Noise Level Indl. Area (Day)	dB	-	77.9	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	--	69.5	IS 9989:1981 (RA 2014)
Location & Date : OHC - 28.07.2022				
Noise Level Indl. Area (Day)	dB	-	52.3	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	--	44.5	IS 9989:1981 (RA 2014)



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KLPL- 356335A



KALYANI LABORATORIES PVT. LTD.

PLOT NO-78/944, MILLENIUM CITY PAHAL, BHIUBANESWAR-752101, ODISHA

TEST REPORT



NABL ULR NO : TC704322000013330P
Test Report No : 1419 | KLPL/7/22/ENVN/01772
Amendment No : - **Issue Date** : 02-Aug-2022
Reference : PO NUMBER :4920054932,PO DATE :24.05.2022 **Amendment Date** : -
Customer Name : FERRO ALLOYS CORPORATION LTD.
Address : CHARGE CHROME PLANT ,D.P. NAGAR, RANDIA-756135,BHADRAK,ODISHA.
Date of receipt : 30-Jul-2022 **Commenced On** : 30-Jul-2022 **Completion On**: 01-Aug-2022
Sample Name : NOISE
Sample Condition : --
Quantity : 17 NOS
Ref.To Sampling Procedure: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
Location & Date : NEAR 45MVA FURNACE - 27.07.2022				
Noise Level Indl. Area (Day)	dB	-	72.3	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	-	65.2	IS 9989:1981 (RA 2014)
Location & Date : NEAR ADMINISTRATIVE BUILDING - 26.07.2022				
Noise Level Indl. Area (Day)	dB	-	54.3	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	-	45.1	IS 9989:1981 (RA 2014)
Location & Date : NEAR AGGLOMERATION PLANT - 26.07.2022				
Noise Level Indl. Area (Day)	dB	-	77.6	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	-	67.2	IS 9989:1981 (RA 2014)
Location & Date : NEAR AUTO GARAGE- 28.07.2022				
Noise Level Indl. Area (Day)	dB	-	61.3	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	-	53.8	IS 9989:1981 (RA 2014)
Location & Date : NEAR BRIQUETTE STORAGE AREA - 27.07.2022				
Noise Level Indl. Area (Day)	dB	-	70.3	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	-	62.0	IS 9989:1981 (RA 2014)
Location & Date : NEAR CENTRAL STORE - 27.07.2022				
Noise Level Indl. Area (Day)	dB	-	53.7	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	-	41.6	IS 9989:1981 (RA 2014)
Location & Date : NEAR DRYER PLANT (AGGLOMERATION) - 27.07.2022				
Noise Level Indl. Area (Day)	dB	-	79.5	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	-	70.6	IS 9989:1981 (RA 2014)
Location & Date : NEAR FACOR COLONEY - 26.07.2022				
Noise Level Indl. Area (Day)	dB	-	50.8	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	-	42.2	IS 9989:1981 (RA 2014)
Location & Date : NEAR FINISHED PRODUCT HANDLING- 28.07.2022				
Noise Level Indl. Area (Day)	dB	--	72.5	IS 9989:1981 (RA 2014)



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KLPL- 357826A of 3



KALYANI LABORATORIES PVT. LTD.

PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

TEST REPORT



NABL ULR NO : TC704322000013330P

Test Report No : 1419 | KLPL/7/22/ENVN/01772

Issue Date : 02-Aug-2022

Amendment No : -

Amendment Date : -

Reference : PO NUMBER :4920054932,PO DATE :24.05.2022

Customer Name : FERRO ALLOYS CORPORATION LTD.

Address : CHARGE CHROME PLANT ,D.P. NAGAR, RANDIA-756135,BHADRAK,ODISHA.

Date of receipt : 30-Jul-2022 Commenced On : 30-Jul-2022 Completion On: 01-Aug-2022

Sample Name : NOISE

Sample Condition : --

Quantity : 17 NOS

Ref.To Sampling Procedure: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
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Remarks : -

Any unusual feature observed during determination :

***** End of Test Report *****

D Anurag

Analysed By
For Kalyani Laboratories Pvt. Ltd.

Mojanee

Authorised Signatory
For Kalyani Laboratories Pvt. Ltd.



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KLPL- 355334A₃

TEST REPORT



NABL ULR NO : TC704322000013414P

Test Report No : 5971 | 153693466KLPL/7/22/WATER/07031 **Issue Date:** 01-Aug-2022

Amendment No : - **Amendment Date** : -

Reference : PO NUMBER :4920054932,PO DATE :24.05.2022

Customer Name : FERRO ALLOYS CORPORATION LTD.

Address : CHARGE CHROME PLANT ,D.P. NAGAR, RANDIA-756135,BHADRAK,ODISHA.

Date of receipt : 26-Jul-2022 **Test Commenced On** : 26-Jul-2022 **Test Completion On:** 30-Jul-2022

Sample Description : **WASTE WATER**

Sample Condition : SEALED

Sample Identification * : **WASTE WATER** **Sampling Date :** 23-Jul-2022

Batch No , Lot No : NA **MFG Date :** NA **EXP Date :** NA

Received Quantity : 1LTR X 2 **Place of Collection :**MRP POND - 23.07.2022

Sample Collected By : By KLPL

Ref.To Sampling Procedure: QSP-07

Parameters	Unit	Requirement	Result	Test Method
CHEMICAL PARAMETER				
i Total Suspended Solids	mg/l	--	14	APHA-23rd Edition (2540 D), 2017
ii Temperature	°c	--	23	APHA 23rd Edition (2550B), 2017
iii Oil & Grease	mg/l	--	<0.025	APHA-23rd Edition (5520 B) 2017
iv Chemical Oxygen Demand	mg/l	--	40	APHA 23rd Edition (5220 B), 2017
v Biochemical Oxygen Demand(For 3 days 27deg C)	mg/l	--	8	APHA 23rd Edition 2012(5210 B), 2017
vi Free Ammonia (as NH3)	mg/l	--	<0.03	APHA-23rd Edition (4500-NH3-B) 2017
vii Ammonical Nitrogen (as NH3-N)	mg/l	--	0.3	APHA-23rd Edition (4500-NH3-B) 2017
viii Total Kjeldhal Nitrogen	mg/l	--	<0.1	APHA-23rd Edition (4500-Norg-B) 2017
ix Residual Chlorine	mg/l	--	<0.04	APHA-23rd Edition (4500-Cl-B) 2017
x Copper (as Cu)	mg/	--	<0.02	IS 3025 (Part 42):1992 RA 2009
xi Selenium (as Se)	mg/l	--	<0.005	IS 3025 (Part 56):2003 RA 2009
xii Zinc (as Zn)	mg/l	--	<0.05	IS 3025 (Part 49):1994 RA 2009
xiii Total Chromium	mg/l	--	<0.02	IS 3025 (Part 52):2003 RA 2009
xiv Hexavalent Chromium (as Cr+6)	mg/l	--	<0.05	APHA-23rd Edition (3500-Cr-B)2017
xv Fluoride as F	mg/l	--	0.8	APHA 23rd Edition (4500-F - -D,-C), 2017
xvi Iron (as Fe)	mg/l	--	1.4	APHA-23rd Edition (3500-Fe-B , 3111 B) 2017
xvii Manganese (as Mn)	mg/l	--	<0.05	IS 3025 (Part 59):2006 RA 2012
xviii Phenolic compounds (as C6H5OH)	mg/l	--	<0.001	IS 3025 (Part 43):1992 RA 2009
xix Bioassay	%	--	90%	IS 6582
xx Sulphide (as S)	mg/l	--	<0.01	APHA-22nd Edition (4500-S2--F)
xxi Dissolved Phosphate (as P)	mg/l	--	<0.1	APHA-23rd Edition (4500-P-D) 2017
xxii Nitrate Nitrogen	mg/l	--	1.2	APHA 23rd Edition (2320 B), 2017

PHYSICAL PARAMETER

5971 | 153693466





KALYANI LABORATORIES PVT. LTD.

PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 5971 | 153693466KLPL/7/22/WATER/07031



Parameters	Unit	Requirement	Result	Test Method
i Odour	--	--	AGREEABLE	APHA 23rd Edition (2120 B), 2017
ii Colour.	Hazen	--	<1.0	APHA 23rd Edition (2120 B), 2017
iii pH Value	--	--	7.25	APHA 23rd Edition (4500-H+-B), 2017
RADIOACTIVITY SUBSTANCES				
i Gross Alpha-activity	uCi/mL	--	BDL	IS 14194 (PART-2):2013
ii Gross Beta-activity	uCi/mL	--	BDL	IS 14194 (PART-1):2013
TOXIC SUBSTANCES				
i Cadmium (as Cd)	mg/l, Max	--	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Lead (as Pb)	mg/l, Max	--	<0.005	IS 3025 (Part 47):1994 RA 2009
iii Mercury (as Hg)	mg/l, Max	--	<0.0005	IS 3025 (Part 48):1994 RA 2009
iv Arsenic (as As)	mg/l, Max	--	<0.001	IS 3025 (Part 37):1988 RA 2009
v Cyanide (as CN)	mg/l, Max	--	<0.02	IS 3025 (Part 27) :1986 RA 2003
vi Nickel (as Ni)	mg/l, Max	--	<0.01	IS 3025 (Part 54):2003 RA 2009

Remarks :

Any unusual feature observed during determination :

End of Test Report

D. Anand

Analysed By
For Kalyani Laboratories Pvt. Ltd.



Debasree

Authorized Signatory
For Kalyani Laboratories Pvt. Ltd

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KLPL- 356330A



KALYANI LABORATORIES PVT. LTD.

PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

TEST REPORT



NABL ULR NO : TC704322000013637P

Test Report No : 1459 | KLPL/8/22/ENVN/01824

Issue Date : 03-Sep-2022

Amendment No : -

Amendment Date : -

Reference : PO NUMBER :4920054932,PO DATE :24.05.2022

Customer Name : FERRO ALLOYS CORPORATION LTD.

Address : CHARGE CHROME PLANT ,D.P. NAGAR, RANDIA-756135,BHADRAK,ODISHA.

Date of receipt : 29-Aug-2022 Commenced On : 29-Aug-2022 Completion On: 30-Aug-2022

Sample Name : NOISE

Sample Condition : --

Quantity : 17 NOS

Ref.To Sampling Procedure: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
Location & Date : NEAR 45MVA FURNACE - 24.08.2022				
Noise Level Indl. Area (Day)	dB	-	71.8	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	-	64.7	IS 9989:1981 (RA 2014)
Location & Date : NEAR ADMINISTRATIVE BUILDING - 23.08.2022				
Noise Level Indl. Area (Day)	dB	-	53.7	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	-	44.6	IS 9989:1981 (RA 2014)
Location & Date : NEAR AGGLOMERATION PLANT - 23.08.2022				
Noise Level Indl. Area (Day)	dB	-	77.0	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	-	66.7	IS 9989:1981 (RA 2014)
Location & Date : NEAR AUTO GARAGE- 25.08.2022				
Noise Level Indl. Area (Day)	dB	-	60.7	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	-	53.3	IS 9989:1981 (RA 2014)
Location & Date : NEAR BRIQUETTE STORAGE AREA - 24.08.2022				
Noise Level Indl. Area (Day)	dB	-	69.6	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	-	61.3	IS 9989:1981 (RA 2014)
Location & Date : NEAR CENTRAL STORE - 24.08.2022				
Noise Level Indl. Area (Day)	dB	-	53.1	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	-	41.0	IS 9989:1981 (RA 2014)
Location & Date : NEAR DRYER PLANT (AGGLOMERATION) - 24.08.2022				
Noise Level Indl. Area (Day)	dB	-	79.0	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	-	70.1	IS 9989:1981 (RA 2014)
Location & Date : NEAR FACOR COLONEY - 23.08.2022				
Noise Level Indl. Area (Day)	dB	-	50.2	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	-	41.7	IS 9989:1981 (RA 2014)
Location & Date : NEAR FINISHED PRODUCT HANDLING- 25.08.2022				
Noise Level Indl. Area (Day)	dB	--	72.0	IS 9989:1981 (RA 2014)



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KLPL- 359350A
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TEST REPORT



NABL ULR NO : TC704322000013637P

Test Report No : 1459 | KLPL/8/22/ENVN/01824

Amendment No : -

Reference : PO NUMBER :4920054932,PO DATE :24.05.2022

Customer Name : FERRO ALLOYS CORPORATION LTD.

Address : CHARGE CHROME PLANT ,D.P. NAGAR, RANDIA-756135,BHADRAK,ODISHA.

Date of receipt : 29-Aug-2022 **Commenced On** : 29-Aug-2022 **Completion On**: 30-Aug-2022

Issue Date : 03-Sep-2022

Amendment Date : -

Sample Name : NOISE

Sample Condition : --

Quantity : 17 NOS

Ref.To Sampling Procedure: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
Location & Date : NEAR GCP- 24.08.2022				
Noise Level Indl. Area (Night)	dB	-	58.5	IS 9989:1981 (RA 2014)
Location & Date : NEAR MAIN GATE - 23.08.2022				
Noise Level Indl. Area (Day)	dB	-	77.7	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	-	71.7	IS 9989:1981 (RA 2014)
Location & Date : NEAR MATERIAL RECOVERY PLANT - 24.08.2022				
Noise Level Indl. Area (Day)	dB	-	75.1	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	-	66.2	IS 9989:1981 (RA 2014)
Location & Date : NEAR MRSS SWITCH YARD - 24.08.2022				
Noise Level Indl. Area (Day)	dB	-	64.6	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	-	55.8	IS 9989:1981 (RA 2014)
Location & Date : NEAR STORAGE AREA - 25.08.2022				
Noise Level Indl. Area (Day)	dB	-	50.1	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	-	39.6	IS 9989:1981 (RA 2014)
Location & Date : NEAR VEHICLE PARKING AREA- 23.08.2022				
Noise Level Indl. Area (Day)	dB	-	47.6	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	-	41.0	IS 9989:1981 (RA 2014)
Location & Date : NEAR WATER COOLING TOWER AREA- 25.08.2022				
Noise Level Indl. Area (Day)	dB	-	77.3	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	--	69.0	IS 9989:1981 (RA 2014)
Location & Date : OHC - 25.08.2022				
Noise Level Indl. Area (Day)	dB	-	51.7	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	--	44.0	IS 9989:1981 (RA 2014)





KALYANI LABORATORIES PVT. LTD.

PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

TEST REPORT



NABL ULR NO : TC704322000013637P

Test Report No : 1459 | KLPL/8/22/ENVN/01824

Issue Date : 03-Sep-2022

Amendment No : -

Amendment Date : -

Reference : PO NUMBER :4920054932,PO DATE :24.05.2022

Customer Name : FERRO ALLOYS CORPORATION LTD.

Address : CHARGE CHROME PLANT ,D.P. NAGAR, RANDIA-756135,BHADRAK,ODISHA.

Date of receipt : 29-Aug-2022

Commenced On : 29-Aug-2022

Completion On: 30-Aug-2022

Sample Name : NOISE

Sample Condition : --

Quantity : 17 NOS

Ref.To Sampling Procedure: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
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Remarks : -

Any unusual feature observed during determination :

***** End of Test Report *****

D. Anupke

Analysed By
For Kalyani Laboratories Pvt. Ltd.

[Signature]

Authorised Signatory
For Kalyani Laboratories Pvt. Ltd.



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KLPL- 359348A

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KALYANI LABORATORIES PVT. LTD.

PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

TEST REPORT



NABL ULR NO : TC704322000013547P

Test Report No : 6038 | 1565834EBKLPL/8/22/WATER/07182 Issue Date: 29-Aug-2022

Amendment No : - Amendment Date : -

Reference : PO NUMBER :4920054932,PO DATE :24.05.2022

Customer Name : FERRO ALLOYS CORPORATION LTD.

Address : CHARGE CHROME PLANT ,D.P. NAGAR, RANDIA-756135,BHADRAK,ODISHA.

Date of receipt : 25-Aug-2022 Test Commenced On : 25-Aug-2022 Test Completion On: 29-Aug-2022

Sample Description : WASTE WATER

Sample Condition : SEALED

Sample Identification * : WASTE WATER Sampling Date : 24-Aug-2022

Batch No , Lot No : NA MFG Date : NA EXP Date : NA

Received Quantity : 1LTR X2NOS Place of Collection :Surface Runoff Treatment Plant Outlet

Sample Collected By : By KLPL (SRTP),DATE-24.08.2022

Ref.To Sampling Procedure: QSP-07

Parameters	Unit	Requirement	Result	Test Method
CHEMICAL PARAMETER				
i Temperature	°c	-	24	APHA 23rd Edition (2550B), 2017
ii Fluoride as F	mg/l, Max	2.0	0.9	APHA 23rd Edition (4500-F - -D,-C), 2017
iii Chemical Oxygen Demand	mg/l, Max	250	50	APHA 23rd Edition (5220 B), 2017
iv Biochemical Oxygen Demand(For 3 days 27deg C)	mg/l, Max	30	10	APHA 23rd Edition 2012(5210 B), 2017
v Copper (as Cu)	mg/l, Max	3.0	<0.02	IS 3025 (PART 42):1992 RA 2009
vi Iron (as Fe)	mg/l, Max	3.0	1.6	APHA 23rd Edition (3500FE-B,3111B), 2017
vii Manganese (as Mn)	mg/l, Max	2	<0.05	IS 3025 (Part 34) 1988 RA 2003
viii Phenolic compounds (as C6H5OH)	mg/l, Max	1.0	<0.001	IS 3025 (Part 43):1992, RA 2003
ix Selenium (as Se)	mg/l, Max	0.05	<0.005	IS 3025 (Part 56) 2003 RA 2009
x Zinc (as Zn)	mg/l, Max	5.0	<0.05	IS 3025 (PART 49): 1994 RA 2009
xi Free Ammonia (as NH3)	mg/l,Max	5.0	<0.03	APHA 23rd Edition (5220 B), 2017
xii Total Kjeldhal Nitrogen	mg/l, Max	100	<0.1	APHA-23rd Edition (4500-NORG-B), 2017
xiii Total Suspended Solids	mg/l,Max	100	18	APHA 23rd Edition (2540 D),2017
xiv Oil & Grease	mg/l, Max	10	<0.025	APHA 23rd Edition (5520B),2017
xv Amonnical Nitrogen (as N)	mg/l	50	<0.3	IS 3025 (PART 34): 1988 RA 2003
xvi Chromium Hexavalent (as Cr +6)	mg/l	0.1	<0.05	APHA 23rd Edition (3500-CR-B):2017
xvii Total Chromium	mg/l	2.0	<0.02	IS 3025 (PART 52): 2003 RA 2009
xviii Residual Chlorine	mg/l,Max	1.0	<0.04	IS 3025 (PART 26):1986 RA 2003
xix Bioassay	--	--	90%	IS 6582/CPCB, Laboratory Analytical Techniques**.
xx Sulphide (as S)	mg/l, Max	2.0	<0.01	APHA-23rd Edition (4500-S2-F), 2017
xxi Dissolved Phosphates (PO42)	mg/l, Max	5.0	<0.1	APHA-23rd Edition (4500-P-D), 2017
xxii Nitrite-Nitrogen (NO2-- N)	mg/l	--	1.4	APHA-23rd Edition (4500-NO2--B), 2017

PHYSICAL PARAMETER



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KLPL- 361587A



KALYANI LABORATORIES PVT. LTD.

PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 6038 | 1565834EBKLPL/8/22/WATER/07182



Parameters	Unit	Requirement	Result	Test Method
i pH Value	---	6.5-9.0	7.4	APHA 23rd Edition (4500-H+-B), 2017
ii Colour.	True col. unit	--	<1.0	APHA 23rd Edition (2120 B),2017
RADIOACTIVITY SUBSTANCES				
i Gross Alpha-activity	micro curie/ml	10-7	BDL	IS 14194 (Part-2) 2013
ii Gross Beta-activity	micro curie/ml	10-6	BDL	IS 14194 (Part-1) 2013
TOXIC SUBSTANCES				
i Cadmium (as Cd)	mg/l, Max	2.0	<0.001	IS 3025 (Part 41): 1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.2	<0.02	IS 3025 (Part 27):1986 RA 2003
iii Lead (as Pb)	mg/l, Max	0.1	<0.005	IS 3025 (Part 47):1994 RA 2003
iv Mercury (as Hg)	mg/l, Max	0.01	<0.0005	APHA-23rd Edition (3112 B) 2017
v Arsenic (as As)	mg/l, Max	0.2	<0.001	IS 3025 (Part 37):1988 RA 2003

Remarks :

Any unusual feature observed during determination :

..... End of Test Report

D Anuragha
Analysed By
For Kalyani Laboratories Pvt. Ltd.

H. S. Sankar
Authorized Signatory
For Kalyani Laboratories Pvt. Ltd





KALYANI LABORATORIES PVT. LTD.

PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

TEST REPORT



NABL ULR NO : TC704322000013635P

Test Report No : 1458 | KLPL/8/22/ENVN/01823

Issue Date : 03-Sep-2022

Amendment No : -

Amendment Date : -

Reference : PO NUMBER :4920054932,PO DATE :24.05.2022

Customer Name : FERRO ALLOYS CORPORATION LTD.

Address : CHARGE CHROME PLANT ,D.P. NAGAR, RANDIA-756135,BHADRAK,ODISHA.

Date of receipt : 29-Aug-2022 Commenced On : 29-Aug-2022 Completion : 03-Sep-2022

Sample Name : AMBIENT AIR QUALITY MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

Quantity : 4 NOS

Ref.To Sampling Procedure: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
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Location & Date : AUTO GARAGE DT-26-27.08.2022

Sulphur Dioxide	µg/m ³	80	8.73	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m ³	80	13.48	IS 5182 (PART 6) :2006
Particulate Matter (PM10)	µg/m ³	100	52.41	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m ³	60	26.21	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m ³	04	0.352	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m ³	180	3.9	KLPL/SOP/AIR-19
Lead (Pb)	µg/m ³	1.0	<0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m ³	400	<10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m ³	05	<1	KLPL/SOP/AIR-07
Benza (a) Pyrene (BaP)	ng/m ³	01	<1	KLPL/SOP/AIR-07
Arsenic (As)	ng/m ³	06	<1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m ³	20	<4	KLPL/SOP/AIR-10

Location & Date : FPHS & MRP PLANT DT-24-25.08.2022

Sulphur Dioxide	µg/m ³	80	8.50	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m ³	80	12.11	IS 5182 (PART 6) :2006
Particulate Matter (PM10)	µg/m ³	100	49.12	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m ³	60	26.79	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m ³	04	0.349	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m ³	180	5.2	KLPL/SOP/AIR-19
Lead (Pb)	µg/m ³	1.0	<0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m ³	400	<10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m ³	05	<1	KLPL/SOP/AIR-07
Benza (a) Pyrene (BaP)	ng/m ³	01	<1	KLPL/SOP/AIR-07
Arsenic (As)	ng/m ³	06	<1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m ³	20	<4	KLPL/SOP/AIR-10



35431363532503
KLPL- 359347A
Page 1 of 3

TEST REPORT



NABL ULR NO : TC704322000013635P

Test Report No : 1458 | KLPL/8/22/ENVN/01823

Issue Date : 03-Sep-2022

Amendment No : -

Amendment Date : -

Reference : PO NUMBER :4920054932,PO DATE :24.05.2022

Customer Name : FERRO ALLOYS CORPORATION LTD.

Address : CHARGE CHROME PLANT ,D.P. NAGAR, RANDIA-756135,BHADRAK,ODISHA.

Date of receipt : 29-Aug-2022 **Commenced On** : 29-Aug-2022 **Completion** : 03-Sep-2022

Sample Name : AMBIENT AIR QUALITY MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

Quantity : 4 NOS

Ref.To Sampling Procedure: QSP-07

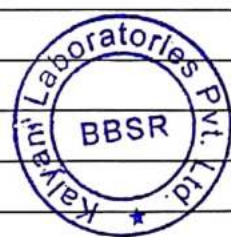
Parameters	Unit	Standard Value	Results	Test Method
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Location & Date : MRSS & CPP DT-25-26.08.2022

Sulphur Dioxide	µg/m ³	80	9.81	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m ³	80	14.05	IS 5182 (PART 6) :2006
Particulate Matter (PM10)	µg/m ³	100	55.80	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m ³	60	30.05	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m ³	04	0.355	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m ³	180	6.5	KLPL/SOP/AIR-19
Lead (Pb)	µg/m ³	1.0	<0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m ³	400	<10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m ³	05	<1	KLPL/SOP/AIR-07
Benza (a) Pyrene (BaP)	ng/m ³	01	<1	KLPL/SOP/AIR-07
Arsenic (As)	ng/m ³	06	<1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m ³	20	<4	KLPL/SOP/AIR-10

Location & Date : R & C LAB DT-23-24.08.2022

Sulphur Dioxide	µg/m ³	80	6.43	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m ³	80	11.80	IS 5182 (PART 6) :2006
Particulate Matter (PM10)	µg/m ³	100	45.06	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m ³	60	22.53	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m ³	04	0.345	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m ³	180	3.9	KLPL/SOP/AIR-19
Lead (Pb)	µg/m ³	1.0	<0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m ³	400	<10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m ³	05	<1	KLPL/SOP/AIR-07
Benza (a) Pyrene (BaP)	ng/m ³	01	<1	KLPL/SOP/AIR-07
Arsenic (As)	ng/m ³	06	<1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m ³	20	<4	KLPL/SOP/AIR-10



35431363532503
KLPL- 359346A
Page 2 of 3



KALYANI LABORATORIES PVT. LTD.

PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

NABL ULR NO : TC704322000013635P

TEST REPORT



Test Report No : 1458 | KLPL/8/22/ENVN/01823

Issue Date : 03-Sep-2022

Amendment No : -

Amendment Date : -

Reference : PO NUMBER :4920054932,PO DATE :24.05.2022

Customer Name : FERRO ALLOYS CORPORATION LTD.

Address : CHARGE CHROME PLANT ,D.P. NAGAR, RANDIA-756135,BHADRAK,ODISHA.

Date of receipt : 29-Aug-2022 Commenced On : 29-Aug-2022

Completion : 03-Sep-2022

Sample Name : AMBIENT AIR QUALITY MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

Quantity : 4 NOS

Ref.To Sampling Procedure: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
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Remarks : -

Any unusual feature observed during determination

End of Test Report

Analysed By
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory
For Kalyani Laboratories Pvt. Ltd.



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KLPL- 359345A

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KALYANI LABORATORIES PVT. LTD.

PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

TEST REPORT



NABL ULR NO : TC704322000013652P

Test Report No : 1460 | KLPL/8/22/ENVN/01825

Issue Date : 05-Sep-2022

Amendment No : -

Amendment Date : -

Reference : PO NUMBER :4920054932,PO DATE :24.05.2022

Customer Name : FERRO ALLOYS CORPORATION LTD.

Address : CHARGE CHROME PLANT ,D.P. NAGAR, RANDIA-756135,BHADRAK,ODISHA.

Date of receipt : 29-Aug-2022 Commenced On : 29-Aug-2022 Completion : 02-Sep-2022

Sample Name : FLUE GAS | STACK MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

Quantity : 3 NOS

Ref.To Sampling Procedure: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
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Location & Date : DEDUSTING SYSTEM - 25.08.2022

Sulphur Dioxide	mg/Nm ³	--	17.5	IS 11255(part-2):1985(RA 2014)
Oxide of Nitrogen as NOx	mg/Nm ³	--	23.2	KLPL/SOP/AIR-06
Particulate Matter	mg/Nm ³	--	59.2	KLPL/SOP/AIR-06
Carbon Monoxide	%	--	0.071	KLPL/SOP/AIR-06
Velocity	m/sec	--*	7.43	KLPL/SOP/AIR-06
Stack Temperature in Deg kelvin	--	--	360	KLPL/SOP/AIR-06
carbon Dioxide	%	--	8.9	KLPL/SOP/AIR-06
Quantity of Gas Flow	Nm ³ / hr	--	1482.35	KLPL/SOP/AIR-06
Mercury	mg/Nm ³	--	0.018	KLPL/SOP/AIR-06

Location & Date : DRYER STACK-4 DT-24.08.2022

Sulphur Dioxide	mg/Nm ³	--	28.2	IS 11255(part-2):1985(RA 2014)
Oxide of Nitrogen as NOx	mg/Nm ³	--	36.5	KLPL/SOP/AIR-06
Particulate Matter	mg/Nm ³	--	87.3	KLPL/SOP/AIR-06
Carbon Monoxide	%	--	0.082	KLPL/SOP/AIR-06
Velocity	m/sec	--	8.09	KLPL/SOP/AIR-06
Stack Temperature in Deg kelvin	--	--	365	KLPL/SOP/AIR-06
carbon Dioxide	%	--	10.1	KLPL/SOP/AIR-06
Quantity of Gas Flow	Nm ³ / hr	--	4695	KLPL/SOP/AIR-06
Mercury	mg/Nm ³	--	0.02	KLPL/SOP/AIR-06

Remarks : -

Any unusual feature observed during determination

End of Test Report

D Anjecho

Analysed By
For Kalyani Laboratories Pvt. Ltd.

M. S. S. S.

Authorised Signatory
For Kalyani Laboratories Pvt. Ltd.



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TEST REPORT



NABL ULR NO : TC704322000013652P

Test Report No : 1460A | KLPL/8/22/ENVN/01825

Issue Date : 05-Sep-2022

Amendment No : -

Amendment Date : -

Reference : PO NUMBER :4920054932,PO DATE :24.05.2022

Customer Name : FERRO ALLOYS CORPORATION LTD.

Address : CHARGE CHROME PLANT ,D.P. NAGAR, RANDIA-756135,BHADRAK,ODISHA.

Date of receipt : 29-Aug-2022 **Commenced On** : 29-Aug-2022 **Completion On**: 29-Aug-2022

Sample Name : FLUE GAS | STACK MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

Quantity : 1 NO

Ref.To Sampling Procedure: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
Location & Date : GCP STACK DT-23.08.2022				
Sulphur Dioxide	mg/Nm ³	-	NIL	IS 11255(part-2):1985(RA 2014)
Oxide of Nitrogen as NOx	mg/Nm ³	-	NIL	KLPL/SOP/AIR-06
Particulate Matter	mg/Nm ³	-	NIL	KLPL/SOP/AIR-06
Carbon Monoxide (CO)	%	-	NIL	KLPL/SOP/AIR-06
Velocity	m/sec	-	NIL	KLPL/SOP/AIR-06
Stack Temperature in Deg kelvin	--	--	NIL	KLPL/SOP/AIR-06
carbon Dioxide	%	--	NIL	KLPL/SOP/AIR-06
Quantity of Gas Flow	Nm ³ / hr	-	NIL	KLPL/SOP/AIR-06
Mercury	mg/Nm ³	--	NIL	KLPL/SOP/AIR-06

Remarks : GCP UNDER MAINTENANCE.

Any unusual feature observed during determination : NIL

***** End of Test Report *****

D. Ananda
Analysed By
For Kalyani Laboratories Pvt. Ltd.



[Signature]
Authorised Signatory
For Kalyani Laboratories Pvt. Ltd.



KALYANI LABORATORIES PVT. LTD.

PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

TEST REPORT



NABL ULR NO : TC704322000014019P

Test Report No : 1485 | KLPL/9/22/ENVN/01868 Issue Date : 07-Oct-2022

Amendment No : - Amendment Date : -

Reference : PO NUMBER : 4920054932, PO DATE : 24.05.2022

Customer Name : FERRO ALLOYS CORPORATION LTD.

Address : CHARGE CHROME PLANT, D.P. NAGAR, RANDIA-756135, BHADRAK, ODISHA.

Date of receipt : 26-Sep-2022 Commenced On : 26-Sep-2022 Completion : 30-Sep-2022

Sample Name : AMBIENT AIR QUALITY MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

Quantity : 4 NOS

Ref. To Sampling Procedure: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
Location & Date : MRSS & CPP DT-23-24.09.2022				
Sulphur Dioxide	µg/m ³	80	8.84	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m ³	80	15.78	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m ³	100	67.52	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m ³	60	37.98	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m ³	04	0.367	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m ³	180	7.3	KLPL/SOP/AIR-19
Lead (Pb)	µg/m ³	1.0	<0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m ³	400	<10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m ³	05	<1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	ng/m ³	01	<1	KLPL/SOP/AIR-07
Arsenic (As)	ng/m ³	06	<1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m ³	20	<4	KLPL/SOP/AIR-10
Location & Date : R & C LAB DT-21-22.09.2022				
Sulphur Dioxide	µg/m ³	80	7.35	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m ³	80	14.05	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m ³	100	51.51	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m ³	60	25.75	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m ³	04	0.351	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m ³	180	3.6	KLPL/SOP/AIR-19
Lead (Pb)	µg/m ³	1.0	<0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m ³	400	<10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m ³	05	<1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	ng/m ³	01	<1	KLPL/SOP/AIR-07
Arsenic (As)	ng/m ³	06	<1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m ³	20	<4	KLPL/SOP/AIR-10



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KLPL- 360391A



KALYANI LABORATORIES PVT. LTD.

PLOT NO-78944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

TEST REPORT



NABL ULR NO : TC704322000014019P
Test Report No : 1485 | KLPL/9/22/ENVN/01868
Amendment No : -
Reference : PO NUMBER :4920054932,PO DATE :24.05.2022
Customer Name : FERRO ALLOYS CORPORATION LTD.
Address : CHARGE CHROME PLANT ,D.P. NAGAR, RANDIA-756135,BHADRAK,ODISHA.
Date of receipt : 26-Sep-2022 Commenced On : 26-Sep-2022 Completion 30-Sep-2022
Sample Name : AMBIENT AIR QUALITY MONITORING
Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED
Quantity : 4 NOS
Ref.To Sampling Procedure: QSP-07

Issue Date : 07-Oct-2022

Amendment Date : -

Parameters	Unit	Standard Value	Results	Test Method
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Location & Date : AUTO GARAGE DT-24-25.09.2022

Sulphur Dioxide	µg/m ³	80	6.40	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m ³	80	11.79	IS 5182 (PART 6) :2006
Particulate Matter (PM10)	µg/m ³	100	46.22	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m ³	60	21.01	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m ³	04	0.346	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m ³	180	4.4	KLPL/SOP/AIR-19
Lead (Pb)	µg/m ³	1.0	<0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m ³	400	<10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m ³	05	<1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	ng/m ³	01	<1	KLPL/SOP/AIR-07
Arsenic (As)	ng/m ³	06	<1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m ³	20	<4	KLPL/SOP/AIR-10

Location & Date : FPHS & MRP PLANT DT-22-23.09.2022

Sulphur Dioxide	µg/m ³	80	9.76	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m ³	80	17.58	IS 5182 (PART 6) :2006
Particulate Matter (PM10)	µg/m ³	100	64.11	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m ³	60	34.19	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m ³	04	0.364	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m ³	180	6.6	KLPL/SOP/AIR-19
Lead (Pb)	µg/m ³	1.0	<0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m ³	400	<10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m ³	05	<1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	ng/m ³	01	<1	KLPL/SOP/AIR-07
Arsenic (As)	ng/m ³	06	<1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m ³	20	<4	KLPL/SOP/AIR-10



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KLPL- 360392A



KALYANI LABORATORIES PVT. LTD.

PLOT NO-78/941, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

TEST REPORT



NABL ULR NO : TC704322000014019P

Test Report No : 1485 | KLPL/9/22/ENVN/01868

Issue Date : 07-Oct-2022

Amendment No : -

Amendment Date : -

Reference : PO NUMBER : 4920054932, PO DATE : 24.05.2022

Customer Name : FERRO ALLOYS CORPORATION LTD.

Address : CHARGE CHROME PLANT, D.P. NAGAR, RANDIA-756135, BHADRAK, ODISHA.

Date of receipt : 26-Sep-2022 Commenced On : 26-Sep-2022 Completion : 30-Sep-2022

Sample Name : AMBIENT AIR QUALITY MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

Quantity : 4 NOS

Ref. To Sampling Procedure: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
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Remarks

Any unusual feature observed during determination

End of Test Report

D Anurita
Analysed By
For Kalyani Laboratories Pvt. Ltd.

Recha Nayak
7/10/2022
Authorised Signatory
For Kalyani Laboratories Pvt. Ltd.



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KALYANI LABORATORIES PVT. LTD.

PLOT NO. 78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

TEST REPORT



NABL ULR NO : TC704322000014021P

Test Report No : 1486A | KLPL/9/22/ENVN/01869A **Issue Date** : 07-Oct-2022

Amendment No : - **Amendment Date** : -

Reference : PO NUMBER :4920054932,PO DATE :24.05.2022

Customer Name : FERRO ALLOYS CORPORATION LTD.

Address : CHARGE CHROME PLANT ,D.P. NAGAR, RANDIA-756135,BHADRAK,ODISHA.

Date of receipt : 26-Sep-2022 **Commenced On** : 26-Sep-2022 **Completion On**: 30-Sep-2022

Sample Name : FLUE GAS | STACK MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

Quantity : 1 NO

Ref.To Sampling Procedure: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
Location & Date : GCP STACK DT-24.09.2022				
Sulphur Dioxide	mg/Nm ³	--	17.6	IS 11255(part-2):1985(RA 2014)
Oxide of Nitrogen as NOx	mg/Nm ³	--	22.7	KLPL/SOP/AIR-06
Particulate Matter	mg/Nm ³	--	56.3	KLPL/SOP/AIR-06
Carbon Monoxide (CO)	%	--	0.068	KLPL/SOP/AIR-06
Velocity	m/sec	--	9.5	KLPL/SOP/AIR-06
Stack Temperature in Deg kelvin	--	--	428	KLPL/SOP/AIR-06
carbon Dioxide	%	--	8.2	KLPL/SOP/AIR-06
Quantity of Gas Flow	Nm ³ / hr	--	1176	KLPL/SOP/AIR-06
Mercury	mg/Nm ³	--	0.016	KLPL/SOP/AIR-06

Remarks :

Any unusual feature observed during determination :

End of Test Report

Analysed By *D. Anujha*
For Kalyani Laboratories Pvt. Ltd.

Pooja Kalyan
Authorised Signatory *7/10/2022*
For Kalyani Laboratories Pvt. Ltd.



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KLPL- 360343A of



KALYANI LABORATORIES PVT. LTD.

PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

TEST REPORT



NABL ULR NO : TC704322000014020P

Test Report No : 1486 | KLPL/9/22/ENVN/01869

Issue Date : 07-Oct-2022

Amendment No : -

Amendment Date : -

Reference : PO NUMBER :4920054932,PO DATE :24.05.2022

Customer Name : FERRO ALLOYS CORPORATION LTD.

Address : CHARGE CHROME PLANT ,D.P. NAGAR, RANDIA-756135,BHADRAK,ODISHA.

Date of receipt : 26-Sep-2022 Commenced On : 26-Sep-2022 Completion : 30-Sep-2022

Sample Name : FLUE GAS | STACK MONITORING

Sample Condition : ASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

Quantity : 2 NOS

Ref.To Sampling Procedure: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
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Location & Date : DEDUSTING SYSTEM - 22.09.2022

Sulphur Dioxide	mg/Nm ³	--	14.5	IS 11255(part-2):1985(RA 2014)
Oxide of Nitrogen as NOx	mg/Nm ³	--	20.2	KLPL/SOP/AIR-06
Particulate Matter	mg/Nm ³	--	50.3	KLPL/SOP/AIR-06
Carbon Monoxide	%	--	0.062	KLPL/SOP/AIR-06
Velocity	m/sec	--	7.8	KLPL/SOP/AIR-06
Stack Temperature In Deg kelvin	--	--	353	KLPL/SOP/AIR-06
carbon Dioxide	%	--	8.0	KLPL/SOP/AIR-06
Quantity of Gas Flow	Nm ³ / hr	--	1965	KLPL/SOP/AIR-06
Mercury	mg/Nm ³	--	0.015	KLPL/SOP/AIR-06

Location & Date : DRYER STACK-4 DT-23.09.2022

Sulphur Dioxide	mg/Nm ³	--	22.2	IS 11255(part-2):1985(RA 2014)
Oxide of Nitrogen as NOx	mg/Nm ³	--	30.2	KLPL/SOP/AIR-06
Particulate Matter	mg/Nm ³	--	66.3	KLPL/SOP/AIR-06
Carbon Monoxide	%	--	0.062	KLPL/SOP/AIR-06
Velocity	m/sec	--	8.2	KLPL/SOP/AIR-06
Stack Temperature in Deg kelvin	--	--	365	KLPL/SOP/AIR-06
carbon Dioxide	%	--	8.0	KLPL/SOP/AIR-06
Quantity of Gas Flow	Nm ³ / hr	--	4263	KLPL/SOP/AIR-06
Mercury	mg/Nm ³	--	0.017	KLPL/SOP/AIR-06

Remarks

Any unusual feature observed during determination

End of Test Report

D Asutcha
Analysed By
For Kalyani Laboratories Pvt. Ltd.



Pechra Kalyan
Authorised Signatory = 7/10/2022
For Kalyani Laboratories Pvt. Ltd.

36C41402033304

KLPL- 360388A of



KALYANI LABORATORIES PVT. LTD.

PLOT NO-78944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

TEST REPORT



NABL ULR NO : TC704322000014021P
Test Report No : 1487 | KLPL/9/22/ENVN/01867
Amendment No : -
Reference : PO NUMBER :4920054932,PO DATE :24.05.2022
Customer Name : FERRO ALLOYS CORPORATION LTD.
Address : CHARGE CHROME PLANT ,D.P. NAGAR, RANDIA-756135,BHADRAK,ODISHA.
Date of receipt : 26-Sep-2022 **Commenced On** : 26-Sep-2022 **Completion** : 27-Sep-2022
Sample Name : NOISE
Sample Condition : -
Quantity : 17NOS
Ref.To Sampling Procedure: QSP-07

Issue Date : 07-Oct-2022

Amendment Date : -

Parameters	Unit	Standard Value	Results	Test Method
Noise Level Indl. Area (Night)	dB	---	59.0	IS 9989:1981 (RA 2014)
Location & Date : NEAR GCP- 22.09.2022				
Noise Level Indl. Area (Day)	dB	---	78.2	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	---	72.5	IS 9989:1981 (RA 2014)
Location & Date : NEAR MAIN GATE - 21.09.2022				
Noise Level Indl. Area (Day)	dB	---	59.6	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	---	48.8	IS 9989:1981 (RA 2014)
Location & Date : NEAR MATERIAL RECOVERY PLANT - 22.09.2022				
Noise Level Indl. Area (Day)	dB	---	75.7	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	---	66.8	IS 9989:1981 (RA 2014)
Location & Date : NEAR MRSS SWITCH YARD - 22.09.2022				
Noise Level Indl. Area (Day)	dB	---	65.2	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	---	56.4	IS 9989:1981 (RA 2014)
Location & Date : NEAR STORAGE AREA - 23.09.2022				
Noise Level Indl. Area (Day)	dB	---	50.7	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	---	40.2	IS 9989:1981 (RA 2014)
Location & Date : NEAR VEHICLE PARKING AREA- 21.09.2022				
Noise Level Indl. Area (Day)	dB	---	48.2	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	---	41.6	IS 9989:1981 (RA 2014)
Location & Date : NEAR WATER COOLING TOWER AREA- 23.09.2022				
Noise Level Indl. Area (Day)	dB	---	78.0	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	---	69.7	IS 9989:1981 (RA 2014)
Location & Date : OHC - 23.09.2022				
Noise Level Indl. Area (Day)	dB	---	52.3	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	---	44.6	IS 9989:1981 (RA 2014)



36C51402133305
KLPL- 360341A



KALYANI LABORATORIES PVT. LTD.

Plot No. 78/944, Millennium City Palah, Bhubaneswar-752101, Odisha

NABL ULR NO : TC704322000014021P
Test Report No : 1487 | KLPL/9/22/ENVN/01867
Amendment No : -
Reference : PO NUMBER :4920054932,PO DATE :24.05.2022
Customer Name : FERRO ALLOYS CORPORATION LTD.
Address : CHARGE CHROME PLANT ,D.P. NAGAR, RANDIA-756135,BHADRAK,ODISHA.
Date of receipt : 26-Sep-2022 Commenced On : 26-Sep-2022
Sample Name : NOISE
Sample Condition : -
Quantity : 17NOS
Ref.To Sampling Procedure: QSP-07

TEST REPORT



Issue Date : 07-Oct-2022

Amendment Date : -

Completion : 27-Sep-2022

Parameters	Unit	Standard Value	Results	Test Method
Location & Date : NEAR 45MVA FURNACE - 22.09.2022				
Noise Level Indl. Area (Day)	dB	---	72.3	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	--	65.2	IS 9989:1981 (RA 2014)
Location & Date : NEAR ADMINISTRATIVE BUILDING - 21.09.2022				
Noise Level Indl. Area (Day)	dB	---	54.2	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	--	45.0	IS 9989:1981 (RA 2014)
Location & Date : NEAR AGGLOMERATION PLANT - 21.09.2022				
Noise Level Indl. Area (Day)	dB	---	77.5	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	---	67.2	IS 9989:1981 (RA 2014)
Location & Date : NEAR AUTO GARAGE- 23.09.2022				
Noise Level Indl. Area (Day)	dB	---	61.2	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	---	53.8	IS 9989:1981 (RA 2014)
Location & Date : NEAR BRIQUETTE STORAGE AREA - 22.09.2022				
Noise Level Indl. Area (Day)	dB	---	70.0	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	---	61.8	IS 9989:1981 (RA 2014)
Location & Date : NEAR CENTRAL STORE - 22.09.2022				
Noise Level Indl. Area (Day)	dB	---	53.6	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	---	41.5	IS 9989:1981 (RA 2014)
Location & Date : NEAR DRYER PLANT (AGGLOMERATION) - 22.09.2022				
Noise Level Indl. Area (Day)	dB	---	79.6	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	---	70.6	IS 9989:1981 (RA 2014)
Location & Date : NEAR FACOR COLONEY - 21.09.2022				
Noise Level Indl. Area (Day)	dB	---	50.7	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	---	42.2	IS 9989:1981 (RA 2014)
Location & Date : NEAR FINISHED PRODUCT HANDLING- 23.09.2022				
Noise Level Indl. Area (Day)	dB	---	72.6	IS 9989:1981 (RA 2014)



36C51402133305
KLPL- 360342A
Page 1 of 3



KALYANI LABORATORIES PVT. LTD.

PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

TEST REPORT



NABL ULR NO : TC704322000014021P

Test Report No : 1487 | KLPL/9/22/ENVN/01867

Issue Date : 07-Oct-2022

Amendment No : -

Amendment Date : -

Reference : PO NUMBER :4920054932,PO DATE :24.05.2022

Customer Name : FERRO ALLOYS CORPORATION LTD.

Address : CHARGE CHROME PLANT ,D.P. NAGAR, RANDIA-756135,BHADRAK,ODISHA.

Date of receipt : 26-Sep-2022 Commenced On : 26-Sep-2022 Completion : 27-Sep-2022

Sample Name : NOISE

Sample Condition : -

Quantity : 17NOS

Ref.To Sampling Procedure: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
------------	------	----------------	---------	-------------

Remarks : -

Any unusual feature observed during determination

End of Test Report

Analysed By *D Soukha*
For Kalyani Laboratories Pvt. Ltd.

Reeta Nayak
Authorised Signatory 7/10/2022
For Kalyani Laboratories Pvt. Ltd.



36C51402133305

KLPL- 360340A of 3

TEST REPORT



NABL ULR NO : TC704322000014023P

Test Report No : 6216 | 1633536C7KLPL/9/22/WATER/07352 **Issue Date:** 08-Oct-2022

Amendment No : - **Amendment Date** : -

Reference : PO NUMBER :4920054932,PO DATE :24.05.2022

Customer Name : FERRO ALLOYS CORPORATION LTD.

Address : CHARGE CHROME PLANT ,D.P. NAGAR, RANDIA-756135,BHADRAK,ODISHA.

Date of receipt : 26-Sep-2022 **Test Commenced On** : 26-Sep-2022 **Test Completion On:** 03-Oct-2022

Sample Description : **DRINKING WATER (IS 10500:2012)**

Sample Condition : SEALED

Sample Identification * : **GROUND WATER (BOREWELL-01)** **Sampling Date :** 24-Sep-2022

Batch No , Lot No : NA **MFG Date :** NA **EXP Date :** NA

Received Quantity : 1LTR X 2 NOS

Sample Collected By : By KLPL

Ref.To Sampling Procedure: QSP-07

Parameters	Unit	Requirement	Result	Test Method
BACTERIOLOGICAL QUALITY				
i E.coli	MPN/100ml.	Shall not be detected in any100ml. Sample	<2	IS 1622:1981 RA 2009
ii Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
CHEMICAL PARAMETER				
i Chloride (as Cl)	mg/l, Max	250	30	IS 3025 (Part 32):1988 RA 2009
ii Free residual chlorine	mg/l, Min	0.2	<0.04	IS 3025 (Part 26):1986 RA 2009
iii Iron (as Fe)	mg/l, Max	1	<0.05	IS 3025 (Part 53):2003 RA 2014
iv Total hardness (as CaCO3),	mg/l, Max	200	152	IS 3025 (Part 21):2009
v Nitrate as NO3	mg/l, Max	45	0.36	IS 3025 (PART 34): 1988 RA 2003
vi Calcium (as Ca)	mg/l, Max	75	52.8	IS 3025 (Part 40):1991 RA 2009
vii Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
viii Fluoride (as F)	mg/l, Max	1	0.5	IS 3025 (Part 60):2008
ix Magnesium (as Mg)	mg/l, Max	30	4.86	IS 3025 (Part 46):1994 RA 2003
x Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xi Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xii Sulphate (as SO4)	mg/l, Max	200	20	IS 3025 (Part 24):1986 RA 2009
xiii Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2003
xiv Mineral oil	mg/l, Max	0.5	<0.5	Clause 6 of IS 3025 (Part- 39):1991 RA 2003
xv Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xvi Total alkalinity (as CaCO3),	mg/l, Max	200	160	IS 3025 (Part 23):1986 RA 2009
xvii Zinc (as Zn)	mg/l, Max	5	<0.05	IS 3025 (Part 49):1994 RA 2009
xviii Sulphide	mg/l, Max	0.05	<0.05	APHA 22nd Edition (4500-S2--F)
xix Aluminum (as Al)	mg/l,Max	0.03	<0.02	IS 3025 (part-55)
xx Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009



Test Report No : **6216 | 1633536C7KLPL/9/22/WATER/07352**



Parameters	Unit	Requirement	Result	Test Method
xxi Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxii Chromium (as Cr)	mg/l, Max	0.05	<0.02	Annex J OF IS 13428 : 2005 RA 2009
xxiii Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxiv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009
xxv Molybdenum (as Mo)	mg/l, Max	0.07	<0.02	IS 3025 (Part 2): 2002
xxvi Chloramines (Cl ₂)	mg/l, Max	0.2	<1.0	IS 3025 (Part 26):2009
xxvii Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xxviii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxix Polychlorinatedbiphenyls	mg/l, Max	0.0005	<0.00005	APHA 22nd Edition 6630
xxx Bromoform	mg/l, Max	0.1	<0.1	APHA 22nd Edition 6232
xxxi Dibromochloromethane	mg/l, Max	0.1	<0.1	APHA 22nd Edition 6232
xxxii Chloroform	mg/l, Max	0.1	<0.2	APHA 22nd Edition 6232
xxxiii Bromodichloromethane	mg/l, Max	0.1	<0.06	APHA 22nd Edition 6232
PESTISIDE				
i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii a-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii β -HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix δ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiii Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xiv Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xv Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xvi Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xvii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xviii Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xix Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xx Endosulfan B	µg/l, Max	0.4	<0.01	USEPA 508
xxi 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1



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Test Report No : **6216 | 1633536C7KLPL/9/22/WATER/07352**



Parameters	Unit	Requirement	Result	Test Method
xxii Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xxiii Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxiv Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxv Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Ethion(Residue to be Determined as ethion and its oxygen analogue and expressed as ethion)	µg/l, Max	3.0	<0.01	USEPA 1657 A

PHYSICAL PARAMETER

i Colour.	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii Odour	--	Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value	---	6.5-8.5	6.8	IS 3025 (Part-11):1983, RA 2012
iv Taste	--	Agreeable	AGREEABLE	IS 3025 (Parts 8):1984 RA 2006
v Turbidity	NTU, Max	1	0.5	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	280	IS 3025 (Part 16):1984 RA 2006

TOXIC SUBSTANCES

i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks :

Any unusual feature observed during determination :

***** End of Test Report *****

D. Anupha
Analysed By
For Kalyani Laboratories Pvt. Ltd.



Pooja Rayan
Authorized Signatory 8/10/2022
For Kalyani Laboratories Pvt. Ltd



KALYANI LABORATORIES PVT. LTD.

PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

TEST REPORT



NABL ULR NO : TC704322000014024P

Test Report No : 6217 | 1633636C8KLPL/9/22/WATER/07353 Issue Date: 08-Oct-2022
 Amendment No : - Amendment Date : -
 Reference : PO NUMBER :4920054932,PO DATE :24.05.2022
 Customer Name : FERRO ALLOYS CORPORATION LTD.
 Address : CHARGE CHROME PLANT ,D.P. NAGAR, RANDIA-756135,BHADRAK,ODISHA.
 Date of receipt : 26-Sep-2022 Test Commenced On 26-Sep-2022 Test Completion 03-Oct-2022
 Sample Description : WASTE WATER

Sample Condition : SEALED
 Sample Identification * : WASTE WATER Sampling Date : 24-Sep-2022
 Batch No , Lot No : NA MFG Date : NA EXP Date : NA
 Received Quantity : 1L X 2NOS Place of Collection :MRP POND - 24.09.2022
 Sample Collected By : By KLPL
 Ref.To Sampling Procedure: QSP-07

Parameters	Unit	Requirement	Result	Test Method	
CHEMICAL PARAMETER					
i	Chemical Oxygen Demand	mg/l	--	40	APHA 23rd Edition (5220 B), 2017
ii	Biochemical Oxygen Demand(For 3 days 27deg C)	mg/l	--	8	APHA 23rd Edition 2012(5210 B), 2017
iii	Copper (as Cu)	mg/l	--	<0.02	IS 3025 (PART 42):1992 RA 2009
iv	Iron (as Fe)	mg/l	--	1.5	APHA 23rd Edition (3500FE-B,3111B), 2017
v	Manganese (as Mn)	mg/l	--	<0.05	IS 3025 (Part 34) 1988 RA 2003
vi	Phenolic compounds (as C6H5OH)	mg/l	--	<0.001	IS 3025 (Part 43):1992, RA 2003
vii	Selenium (as Se)	mg/l	--	<0.005	IS 3025 (Part 56) 2003 RA 2009
viii	Zinc (as Zn)	mg/l	--	<0.05	IS 3025 (PART 49): 1994 RA 2009
ix	Free Ammonia (as NH3)	mg/l	--	<0.03	APHA 23rd Edition (5220 B), 2017
x	Total Kjeldhal Nitrogen	mg/l	--	<0.1	APHA-23rd Edition (4500-NORG-B), 2017
xi	Total Suspended Soilds	mg/l	--	16	APHA 23rd Edition (2540 D),2017
xii	Oil & Grease	mg/l	--	<0.025	APHA 23rd Edition (5520B),2017
xiii	Amonnical Nitrogen (as N)	mg/l	--	<0.3	IS 3025 (PART 34): 1988 RA 2003
xiv	Chromium Hexavalent	mg/l	--	<0.05	APHA 23rd Edition (3500-CR-B):2017
xv	Total Chromium	mg/l	--	<0.02	IS 3025 (PART 52): 2003 RA 2009
xvi	Residual Chlorine	mg/l	--	<0.04	IS 3025 (PART 26):1986 RA 2003
xvii	Bioassay	%	--	90%	IS 6582/CPCB, Laboratory Analytical Techniques**.
xviii	Sulphide (as S)	mg/l	--	<0.01	APHA-23rd Edition (4500-S2-F), 2017
xix	Dissolved Phosphates (PO42)	mg/l	--	<0.1	APHA-23rd Edition (4500-P-D), 2017
xx	Nitrite-Nitrogen (NO2-- N)	mg/l	--	1.0	APHA-23rd Edition (4500-NO2--B), 2017
xxi	Temperature	°c	--	23	APHA 23rd Edition (2550B), 2017
xxii	Fluoride as F	mg/l	--	0.83	APHA 23rd Edition (4500-F - -D,-C), 2017

PHYSICAL PARAMETER



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KLPL- 360335A



KALYANI LABORATORIES PVT. LTD.

PLOT NO 78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No

6217 | 1633636C8KLPL/9/22/WATER/07353



Parameters	Unit	Requirement	Result	Test Method
i pH Value	---	--	7.2	APHA 23rd Edition (4500-H+-B), 2017
ii Colour.	True col. unit	--	<1.0	APHA 23rd Edition (2120 B),2017
RADIOACTIVITY SUBSTANCES				
i Gross Alpha-activity	uCi/mL	--	BDL	IS 14194 (Part-2) 2013
ii Gross Beta-activity	uCi/mL	--	BDL	IS 14194 (Part-1) 2013
TOXIC SUBSTANCES				
i Cadmium (as Cd)	mg/l	--	<0.001	IS 3025 (Part 41): 1992 RA 2009
ii Cyanide (as CN)	mg/l	--	<0.02	IS 3025 (Part 27):1986 RA 2003
iii Lead (as Pb)	mg/l	--	<0.005	IS 3025 (Part 47):1994 RA 2003
iv Mercury (as Hg)	mg/l	--	<0.0005	APHA-23rd Edition (3112 B) 2017
v Arsenic (as As)	mg/l	--	<0.001	IS 3025 (Part 37):1988 RA 2003

Remarks

Any unusual feature observed during determination

..... End of Test Report

Analysed By
For Kalyani Laboratories Pvt.

Authorized Signatory
For Kalyani Laboratories Pvt. Ltd





KALYANI LABORATORIES PVT. LTD.

PLOT NO-78/944, MILLENIUM CITY PAHAL, BHUBANESWAR-752101, ODISHA

TEST REPORT

NABL ULR NO : TC704322000014022P
Test Report No : 501 | 1634236C6 KLPL/9/22/GENERAL/00967 Issue Date : 07-Oct-2022
Amendment No : - Amendment Date : -
Reference : PO NUMBER : 4920054932, PO DATE : 24.05.2022
Customer Name : FERRO ALLOYS CORPORATION LTD.
Address : CHARGE CHROME PLANT ,D.P. NAGAR, RANDIA-756135,BHADRAK,ODISHA.
Date of receipt : 26-Sep-2022 Commenced On : 26-Sep-2022 Completion : 30-Sep-2022

Name : SLAG
Sample Description : SEALED
Sample Identification * : SLAG
Received Quantity : 1 NO.
Sample Collected By : SUBMITTED BY KLPL
Ref.To Sampling Procedure: QSP-07

Parameters	Unit	Result	Test Method
CHEMICAL PARAMETER			
I Copper (as Cu)	mg/l	BDL	TCLP Criteria of hazardous waste characterisation procedure
II Hexavalent Chromium	mg/l	0.063	TCLP Criteria of hazardous waste characterisation procedure
III Total Chromium	mg/l	0.051	TCLP Criteria of hazardous waste characterisation procedure
IV Zinc (as Zn)	mg/l	0.132	TCLP Criteria of hazardous waste characterisation procedure
TOXIC SUBSTANCES			
V Cadmium (as Cd)	mg/l	BDL	TCLP Criteria of hazardous waste characterisation procedure
VI Lead (as Pb)	mg/l	0.068	TCLP Criteria of hazardous waste characterisation procedure
VII CO	mg/l	0.058	TCLP Criteria of hazardous waste characterisation procedure
VIII Nickel (as Ni)	mg/l	0.123	TCLP Criteria of hazardous waste characterisation procedure

** : Not Covered Under NABL Scope

Remarks

Any unusual feature observed during determination

..... End of Test Report

D. Boukha
Analysed By
For Kalyani Laboratories Pvt.

Rachana Nayak
Authorized Signatory 7/10/2022
For Kalyani Laboratories Pvt. Ltd



KLPL- 360339A ¹



vedanta
transforming elements



Ref. No:FACOR/HSE/CCP/25-03
Dt. 14.05.2022

To,

**The Member Secretary
State Pollution Control Board,
Paribesh Bhawan, A/118,
Nilakantha Nagar, Unit-VIII,
Bhubaneswar.**

Sub: Submission of Annual Return in Form-4 under Hazardous Waste (Management & Handling) Rules, 1989 by M/s Ferro Alloys Corporation Ltd, Charge Chrome Plant, Randia, Bhadrak.

Dear Sir,

We refer to the subject cited above and enclose herewith the Annual Return regarding handling of Hazardous Waste in **Form-4**, duly filled in for the year 2021-22 by M/s Ferro Alloys Corporation Ltd., Charge Chrome Plant for your kind information and record.

Thanking you.

Yours faithfully,
For Ferro Alloys Corporation Ltd

Manoj Kumar Shaw
Manoj Kumar Shaw
Factory Manager- CCP

Copy to: Regional Officer, Regional office, SPCB, Balasore: For kind information

Ferro Alloys Corporation Limited
Charge Chrome Plant, D.P. Nagar, Randia- 756 135, Dist. Bhadrak, Odisha, India
Phone : 06784 240320/240347/240272, Fax : 06784 240626
E-mail : facor.corporate@vedanta.co.in | website : www.facorgroup.in
CIN : L45201OR1955PLC008400

Sensitivity: Internal (C3)

FORM 4

[See rules 5(6) and 22 (2)]

**FORM FOR FILING ANNUAL RETURNS
BY THE OCCUPIER OR OPERATOR OF FACILITY**

[To be submitted by occupier/operator of disposal facility to State Pollution Control Board/Pollution Control Committee by 30th June of every year for the preceding period April to March]

1.	Name and address of the generator/operator of facility	: Ferro Alloys Corporation Ltd., Charge Chrome plant, At- Randia, Dist- Bhadrak					
2.	Name of the authorised person and full address with telephone and fax number	: Mr. Manoj Kumar Shaw, Factory Manager Charge Chrome Plant, D.P.Nagar, Randia, Bhadrak Phone: 06784-240516 Fax: 06784-240626					
3.	Description of hazardous waste	Physical form with description	Chemical form				
		Used Oil	Stream-5.1, Schedule-I				
		Flue gas cleaning residue	Stream-35.1, Schedule-I				
		Waste containing oil	Stream-5.2, Schedule-I				
4.	Quantity of hazardous wastes (in MTA)	Empty Barrels	Stream-33.1, Schedule-I				
		Type of hazardous waste		Quantity (in Tonnes/KL)			
		(a) Used oil	0.36 KL				
		(b) Flue dust	1924.82MT				
		(c) Waste containing oil	0.85 MT				
5.	Description of Storage	(d) Empty Barrels	12 nos.				
		: 1.Used oil collected in drums and are being stored on concrete platform under shed. After generation of larger quantity we used to sell it to registered recycler. 2.Waste containing oil has been utilized in furnace. 3. Flue dust are being utilized as raw material in the furnace after making pallets / briquettes.					
6.	Description of Treatment	: N.A					
7.	Details of transportation	NA	Name & address of	Mode of packing	Mode of transportation	Date of transportation	
8.	Details of disposal of hazardous waste	NA	Name & address of	Mode of packing	Mode of transportation	Date of transportation	
		Flue dust- 1924.82MT are utilized as raw material in the furnace after making pallets/ briquettes.					
9.	Quantity of useful materials sent back to the manufacturers* and others*	NA	Name and type of material sent back		Quantity in Tonnes/KL		
		Manufacturers					
		Others*					

Date : 14.05.2022

Place: Bhadrak

Signature :

Manoj Kumar Shaw

Designation: Factory Manager



Ferro Alloys Corporation Ltd.

Manoj Kumar Shaw
Authorised Signature

Annexure-D
Annexure-D

FACOR

CHARGE CHROME PLANT

COPY

Ref : CCP/Mech/78
Date : 03.10.2009

THROUGH COURIER SERVICE

The Environmental Engineer-II,
State Pollution Control Board, Orissa,
Paribesh Bhawan,
A/118, Nilakantha Nagar, Unit-VIII,
BHUBANESWAR - 751 012.

Dear Sir,

Sub : Display of copy of Environmental Clearance for 30 days
for reference of Public.

Ref : Your Memo No. 14880 dated 16.09.09.

With reference to your above Memo and general condition No. X of Environmental Clearance, we have displayed an advertisement regarding Environmental Clearance on 1st October '09 in the daily Oriya Newspaper, SAMAJ and SAMBAD for information of Public. Copy of the same are enclosed herewith for your kind information and record.

Thanking you,

Yours faithfully,
for Ferro Alloys Corporation Ltd.,
Charge Chrome Plant.

(P.G. SURESH KUMAR)
GENERAL MANAGER

Encl : As above.

Cc to : Collector & District Magistrate, Bhadrak.
General Manager, D.I.C., Bhadrak.
Regional Officer, State Pollution Control Board, Balasore.

Cc to : SM (P&S), SM (Maint.), MF, REC.



PUBLIC NOTICE

is hereby informed to the General Public that
M/s. Ferro Alloys Corpn. Ltd. accorded
Environmental Clearance from Ministry of
Environment & Forest Govt. of India for
increasing production capacity of Chrome
Chrome Plant, Randia. Bhadrak from 65,000MT
to 1,30,000MT p.a. The copy of the clearance
letter is available with the State Pollution Control
Board Committee and may also be seen at
website of Ministry of Environment & Forests at
<http://envfor.nic.in>

S/3764



ସର୍ବସାଧାରଣ ବିଜ୍ଞପ୍ତି

ଏତଦ୍ୱାରା ସର୍ବସାଧାରଣଙ୍କ ଅବଗତ ନିମନ୍ତେ ଜଣାଇ
ଦିଆଯାଉଛି କି ସେ ଯେକୌଣସି ଲାଭକ୍ଷେତ୍ର ପ୍ରାୟତଃ ରାଜିଆ, ତାହାର
ବାକ୍ଷିକ ଉତ୍ପାଦନ କ୍ଷମତା ୧୫,୦୦୦ ଟନ୍ ରୁ ୧,୩୦,୦୦୦
ଟନ୍ କୁ ବୃଦ୍ଧି କରିବା ପାଇଁ ଭାରତ ସରକାରଙ୍କ ଜର୍ଜାଲ
ଏବଂ ପରିଚେଷ୍ଟା ମନ୍ତ୍ରାଳୟ ଦ୍ୱାରା ସ୍ୱୀକୃତି ପ୍ରାପ୍ତ ହୋଇଛି
ଉକ୍ତ ସ୍ୱୀକୃତି ପ୍ରାପ୍ତ ଚିଠି ଡିଡ଼ିଟି ସରକାରଙ୍କ ପ୍ରତ୍ୟକ୍ଷ
ନିର୍ଦ୍ଦେଶ ଉପଲବ୍ଧ । ଏହା ମଧ୍ୟ ଭାରତ ସରକାରଙ୍କ
ପ୍ରତ୍ୟକ୍ଷ ଏବଂ ଜର୍ଜାଲ ବିଭାଗର Website [http://
invtor.nic.in](http://invtor.nic.in) ରେ ଦେଖାଯାଇ ପାରିବ ।

